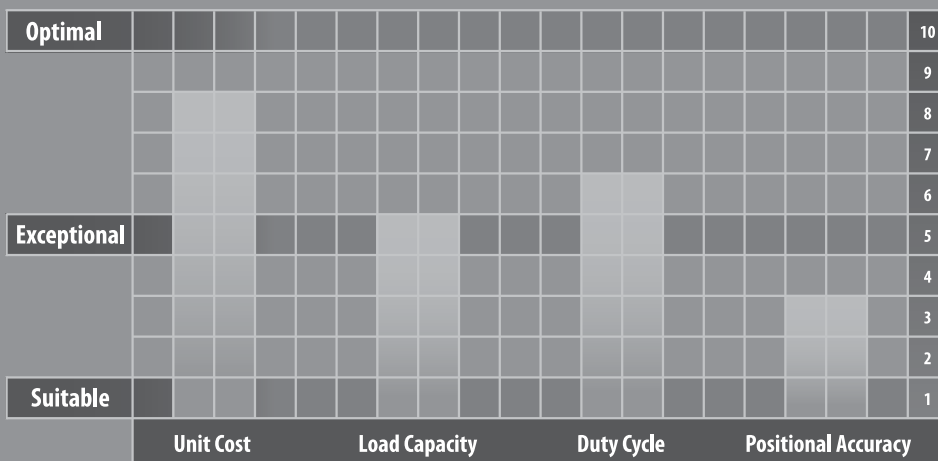


## EJM SERIES

An excellent choice for customers looking for a highly flexible, yet value-priced servo rated gearbox without sacrificing performance or durability. The EJM series comes in six different frame sizes to meet a wide range of application requirements and can support servo motors with up to 7.5kW capacity. Solid, hollow and double extended output shaft options allow for flexible machine design. The all-aluminum housing construction offers weight savings of up to 30% with improved thermal horsepower over cast iron.

The EJM series comes vent free and lubricated for life with synthetic oil, making it a reliable, maintenance-free solution. This product is ideally suited for applications within the packaging, material handling and general automation markets.



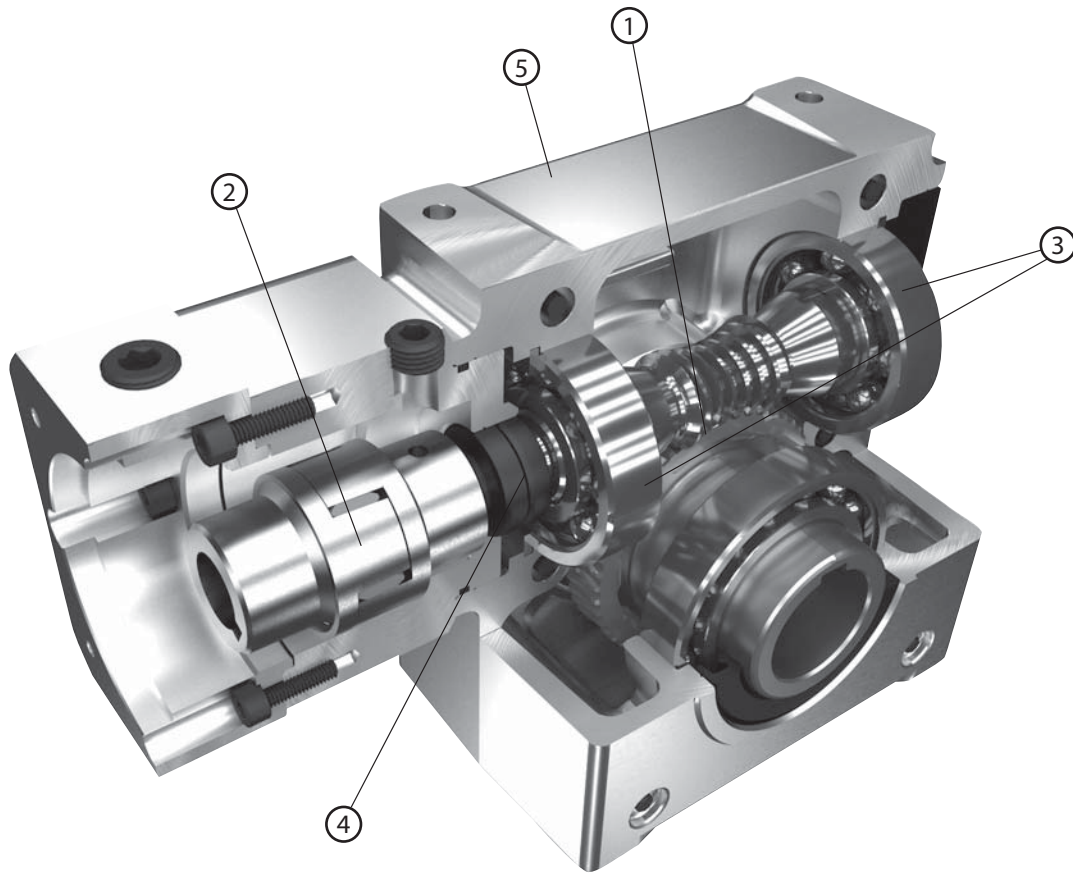


### EJM SERIES

- Value engineered solution for less demanding servo applications
- Lightweight aluminum housing offers weight savings combined with improved thermal horsepower over cast iron
- Maintenance free solution; vent free and lubricated for life with synthetic oil
- Rated torque up to 614 Nm (up to 7.5 kw servo motor capacity)

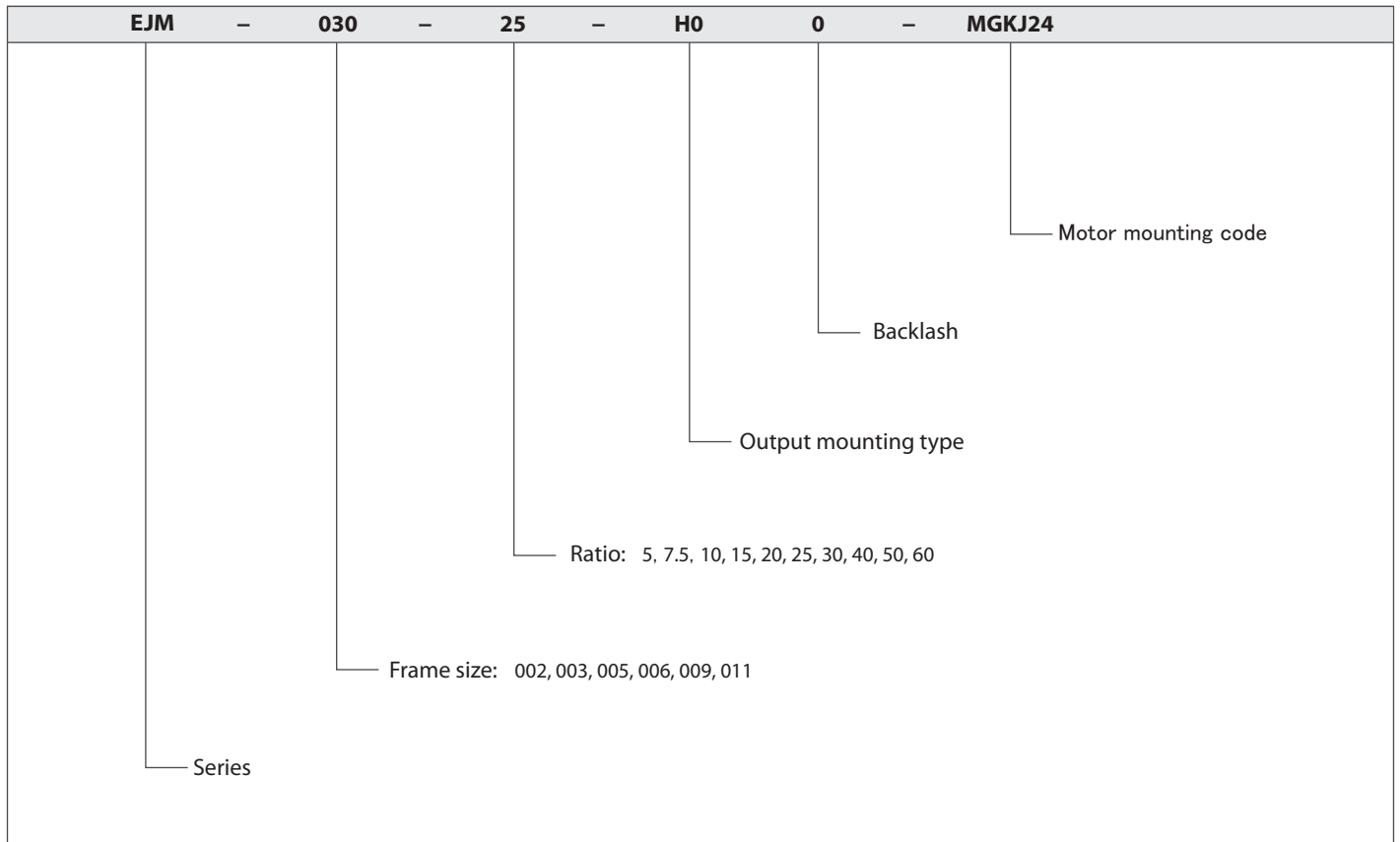
# EJM SERIES Right-angle Worm

## EJM Series Features



- ① Globoidal gear set – between 3-8 teeth in contact at once, allowing 300% shock load capacity
- ② Integrated zero backlash coupling provides fast, error free alignment
- ③ Ball bearings help reduce friction and heat, as compared to tapered roller designs
- ④ Double oil seal and o-ring provide IP65 protection
- ⑤ Thermally efficient, lightweight aluminum housing

## EJM Series Model Code



EJM

# EJM SERIES Right-angle Worm

## EJM 002 1-Stage Specifications

Frame Size	002						
Stage	1-Stage						
Ratio	Unit	Note	5	7.5	10	15	20
Nominal Output Torque	[Nm]	--	29	32	33	35	35
Maximum Acceleration Torque	[Nm]	--	38	40	33	42	43
Emergency Stop Torque	[Nm]	--	58	64	66	70	70
No Load Running Torque	[Nm]	*1	0.51				
Nominal Input Speed	[rpm]	--	2,000				
Maximum Continuous Input Speed	[rpm]	--	3,000				
Maximum Cyclic Input Speed	[rpm]	--	4,000				
Maximum Radial Load	[N]	*2	1,780				
Maximum Axial Load	[N]	*3	1,330				
Moment of Inertia	[kgcm <sup>2</sup> ]	--	0.36	0.33	0.32	0.31	0.31
Efficiency	[%]	*4	87	86	82	77	72
Torsional Rigidity	[Nm/arcmin]	--	1.0				
Maximum Torsional Backlash	[Arc-min]	--	≤ 41				
Noise Level	[dBA]	*5	≤ 73				
Ambient Temperature	[°C]	--	-25 ~ 93				
Permitted Housing Temperature	[°C]	--	100				
Protection Class	--	--	IP55				
Lubrication	--	--	Synthetic Oil				
Service Life	[Hours]	--	25,000				
Weight	[kg]	*6	3.2				

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJM 002 1-Stage Specifications

Frame Size	002						
Stage	1-Stage						
Ratio	Unit	Note	25	30	40	50	60
Nominal Output Torque	[Nm]	--	39	36	33	32	30
Maximum Acceleration Torque	[Nm]	--	48	45	39	38	36
Emergency Stop Torque	[Nm]	--	78	72	66	64	60
No Load Running Torque	[Nm]	*1	0.51				
Nominal Input Speed	[rpm]	--	2,000				
Maximum Continuous Input Speed	[rpm]	--	3,000				
Maximum Cyclic Input Speed	[rpm]	--	4,000				
Maximum Radial Load	[N]	*2	1,780				
Maximum Axial Load	[N]	*3	1,330				
Moment of Inertia	[kgcm <sup>2</sup> ]	--	0.30	0.30	0.30	0.30	0.30
Efficiency	[%]	*4	68	65	56	50	44
Torsional Rigidity	[Nm/arcmin]	--	1.0				
Maximum Torsional Backlash	[Arc-min]	--	≤ 41				
Noise Level	[dBA]	*5	≤ 73				
Ambient Temperature	[°C]	--	-25 ~ 93				
Permitted Housing Temperature	[°C]	--	100				
Protection Class	--	--	IP55				
Lubrication	--	--	Synthetic Oil				
Service Life	[Hours]	--	25,000				
Weight	[kg]	*6	3.2				

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

# EJM SERIES Right-angle Worm

## EJM 003 1-Stage Specifications

Frame Size	003						
Stage	1-Stage						
Ratio	Unit	Note	5	7.5	10	15	20
Nominal Output Torque	[Nm]	--	43	47	48	52	52
Maximum Acceleration Torque	[Nm]	--	56	59	51	61	63
Emergency Stop Torque	[Nm]	--	86	94	96	104	104
No Load Running Torque	[Nm]	*1	0.51				
Nominal Input Speed	[rpm]	--	2,000				
Maximum Continuous Input Speed	[rpm]	--	3,000				
Maximum Cyclic Input Speed	[rpm]	--	4,000				
Maximum Radial Load	[N]	*2	2,110				
Maximum Axial Load	[N]	*3	1,770				
Moment of Inertia	[kgcm <sup>2</sup> ]	--	0.75	0.64	0.61	0.58	0.57
Efficiency	[%]	*4	88	86	84	80	75
Torsional Rigidity	[Nm/arcmin]	--	1.9				
Maximum Torsional Backlash	[Arc-min]	--	≤ 30				
Noise Level	[dBA]	*5	≤ 75				
Ambient Temperature	[°C]	--	-25 ~ 93				
Permitted Housing Temperature	[°C]	--	100				
Protection Class	--	--	IP55				
Lubrication	--	--	Synthetic Oil				
Service Life	[Hours]	--	25,000				
Weight	[kg]	*6	5.4				

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJM 003 1-Stage Specifications

Frame Size	003						
Stage	1-Stage						
Ratio	Unit	Note	25	30	40	50	60
Nominal Output Torque	[Nm]	--	55	54	48	47	44
Maximum Acceleration Torque	[Nm]	--	67	65	58	57	53
Emergency Stop Torque	[Nm]	--	110	108	96	94	88
No Load Running Torque	[Nm]	*1	0.51				
Nominal Input Speed	[rpm]	--	2,000				
Maximum Continuous Input Speed	[rpm]	--	3,000				
Maximum Cyclic Input Speed	[rpm]	--	4,000				
Maximum Radial Load	[N]	*2	2,110				
Maximum Axial Load	[N]	*3	1,770				
Moment of Inertia	[kgcm <sup>2</sup> ]	--	0.57	0.56	0.56	0.56	0.56
Efficiency	[%]	*4	71	68	60	54	48
Torsional Rigidity	[Nm/arcmin]	--	1.9				
Maximum Torsional Backlash	[Arc-min]	--	≤ 30				
Noise Level	[dBA]	*5	≤ 75				
Ambient Temperature	[°C]	--	-25 ~ 93				
Permitted Housing Temperature	[°C]	--	100				
Protection Class	--	--	IP55				
Lubrication	--	--	Synthetic Oil				
Service Life	[Hours]	--	25,000				
Weight	[kg]	*6	5.4				

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models



# EJM SERIES Right-angle Worm

## EJM 005 1-Stage Specifications

Frame Size	005						
Stage	1-Stage						
Ratio	Unit	Note	5	7.5	10	15	20
Nominal Output Torque	[Nm]	--	81	88	90	100	101
Maximum Acceleration Torque	[Nm]	--	105	112	100	120	123
Emergency Stop Torque	[Nm]	--	162	176	180	200	202
No Load Running Torque	[Nm]	*1	1.61				
Nominal Input Speed	[rpm]	--	2,000				
Maximum Continuous Input Speed	[rpm]	--	3,000				
Maximum Cyclic Input Speed	[rpm]	--	4,000				
Maximum Radial Load	[N]	*2	4,330				
Maximum Axial Load	[N]	*3	3,110				
Moment of Inertia	[kgcm <sup>2</sup> ]	--	1.83	1.55	1.45	1.39	1.36
Efficiency	[%]	*4	91	89	87	84	80
Torsional Rigidity	[Nm/arcmin]	--	3.1				
Maximum Torsional Backlash	[Arc-min]	--	≤ 23				
Noise Level	[dBA]	*5	≤ 80				
Ambient Temperature	[°C]	--	-25 ~ 93				
Permitted Housing Temperature	[°C]	--	100				
Protection Class	--	--	IP55				
Lubrication	--	--	Synthetic Oil				
Service Life	[Hours]	--	25,000				
Weight	[kg]	*6	7.3				

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJM 005 1-Stage Specifications

Frame Size	005						
Stage	1-Stage						
Ratio	Unit	Note	25	30	40	50	60
Nominal Output Torque	[Nm]	--	109	105	94	91	85
Maximum Acceleration Torque	[Nm]	--	132	127	114	109	102
Emergency Stop Torque	[Nm]	--	218	210	188	182	170
No Load Running Torque	[Nm]	*1	1.61				
Nominal Input Speed	[rpm]	--	2,000				
Maximum Continuous Input Speed	[rpm]	--	3,000				
Maximum Cyclic Input Speed	[rpm]	--	4,000				
Maximum Radial Load	[N]	*2	4,330				
Maximum Axial Load	[N]	*3	3,110				
Moment of Inertia	[kgcm <sup>2</sup> ]	--	1.35	1.34	1.34	1.33	1.33
Efficiency	[%]	*4	77	74	67	62	56
Torsional Rigidity	[Nm/arcmin]	--	3.1				
Maximum Torsional Backlash	[Arc-min]	--	≤ 23				
Noise Level	[dBA]	*5	≤ 80				
Ambient Temperature	[°C]	--	-25 ~ 93				
Permitted Housing Temperature	[°C]	--	100				
Protection Class	--	--	IP55				
Lubrication	--	--	Synthetic Oil				
Service Life	[Hours]	--	25,000				
Weight	[kg]	*6	7.3				

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

# EJM SERIES Right-angle Worm

## EJM 006 1-Stage Specifications

Frame Size	006						
Stage	1-Stage						
Ratio	Unit	Note	5	7.5	10	15	20
Nominal Output Torque	[Nm]	--	133	144	145	165	168
Maximum Acceleration Torque	[Nm]	--	172	183	154	186	207
Emergency Stop Torque	[Nm]	--	266	288	290	330	336
No Load Running Torque	[Nm]	*1	2.72				
Nominal Input Speed	[rpm]	--	2,000				
Maximum Continuous Input Speed	[rpm]	--	3,000				
Maximum Cyclic Input Speed	[rpm]	--	4,000				
Maximum Radial Load	[N]	*2	4,890				
Maximum Axial Load	[N]	*3	3,550				
Moment of Inertia	[kgcm <sup>2</sup> ]	--	2.61	2.02	1.81	1.66	1.61
Efficiency	[%]	*4	92	91	89	87	83
Torsional Rigidity	[Nm/arcmin]	--	5.6				
Maximum Torsional Backlash	[Arc-min]	--	≤ 20				
Noise Level	[dBA]	*5	≤ 80				
Ambient Temperature	[°C]	--	-25 ~ 93				
Permitted Housing Temperature	[°C]	--	100				
Protection Class	--	--	IP55				
Lubrication	--	--	Synthetic Oil				
Service Life	[Hours]	--	25,000				
Weight	[kg]	*6	10				

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJM 006 1-Stage Specifications

Frame Size	006						
Stage	1-Stage						
Ratio	Unit	Note	25	30	40	50	60
Nominal Output Torque	[Nm]	--	183	175	158	150	142
Maximum Acceleration Torque	[Nm]	--	223	212	191	181	170
Emergency Stop Torque	[Nm]	--	366	350	316	300	284
No Load Running Torque	[Nm]	*1	2.72				
Nominal Input Speed	[rpm]	--	2,000				
Maximum Continuous Input Speed	[rpm]	--	3,000				
Maximum Cyclic Input Speed	[rpm]	--	4,000				
Maximum Radial Load	[N]	*2	4,890				
Maximum Axial Load	[N]	*3	3,550				
Moment of Inertia	[kgcm <sup>2</sup> ]	--	1.58	1.57	1.56	1.55	1.55
Efficiency	[%]	*4	80	78	72	66	62
Torsional Rigidity	[Nm/arcmin]	--	5.6				
Maximum Torsional Backlash	[Arc-min]	--	≤ 20				
Noise Level	[dBA]	*5	≤ 80				
Ambient Temperature	[°C]	--	-25 ~ 93				
Permitted Housing Temperature	[°C]	--	100				
Protection Class	--	--	IP55				
Lubrication	--	--	Synthetic Oil				
Service Life	[Hours]	--	25,000				
Weight	[kg]	*6	10				

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJM 009 1-Stage Specifications

Frame Size	009						
Stage	1-Stage						
Ratio	Unit	Note	5	7.5	10	15	20
Nominal Output Torque	[Nm]	--	245	262	259	305	314
Maximum Acceleration Torque	[Nm]	--	317	333	259	312	386
Emergency Stop Torque	[Nm]	--	490	524	518	610	628
No Load Running Torque	[Nm]	*1	4.80				
Nominal Input Speed	[rpm]	--	2,000				
Maximum Continuous Input Speed	[rpm]	--	2,000				
Maximum Cyclic Input Speed	[rpm]	--	3,000				
Maximum Radial Load	[N]	*2	6,890				
Maximum Axial Load	[N]	*3	4,890				
Moment of Inertia	[kgcm <sup>2</sup> ]	--	12.4	10.5	9.87	9.40	9.24
Efficiency	[%]	*4	93	92	91	89	86
Torsional Rigidity	[Nm/arcmin]	--	15.5				
Maximum Torsional Backlash	[Arc-min]	--	≤ 15				
Noise Level	[dBA]	*5	≤ 83				
Ambient Temperature	[°C]	--	-25 ~ 93				
Permitted Housing Temperature	[°C]	--	100				
Protection Class	--	--	IP55				
Lubrication	--	--	Synthetic Oil				
Service Life	[Hours]	--	25,000				
Weight	[kg]	*6	20				

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJM 009 1-Stage Specifications

Frame Size	009						
Stage	1-Stage						
Ratio	Unit	Note	25	30	40	50	60
Nominal Output Torque	[Nm]	--	308	327	295	278	264
Maximum Acceleration Torque	[Nm]	--	376	369	356	335	317
Emergency Stop Torque	[Nm]	--	616	654	590	556	528
No Load Running Torque	[Nm]	*1	4.80				
Nominal Input Speed	[rpm]	--	2,000				
Maximum Continuous Input Speed	[rpm]	--	2,000				
Maximum Cyclic Input Speed	[rpm]	--	3,000				
Maximum Radial Load	[N]	*2	6,890				
Maximum Axial Load	[N]	*3	4,890				
Moment of Inertia	[kgcm <sup>2</sup> ]	--	9.17	9.12	9.08	9.07	9.06
Efficiency	[%]	*4	83	81	76	71	66
Torsional Rigidity	[Nm/arcmin]	--	15.5				
Maximum Torsional Backlash	[Arc-min]	--	≤ 15				
Noise Level	[dBA]	*5	≤ 83				
Ambient Temperature	[°C]	--	-25 ~ 93				
Permitted Housing Temperature	[°C]	--	100				
Protection Class	--	--	IP55				
Lubrication	--	--	Synthetic Oil				
Service Life	[Hours]	--	25,000				
Weight	[kg]	*6	20				

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

# EJM SERIES Right-angle Worm

## EJM 011 1-Stage Specifications

Frame Size	011						
Stage	1-Stage						
Ratio	Unit	Note	5	7.5	10	15	20
Nominal Output Torque	[Nm]	--	374	398	395	469	485
Maximum Acceleration Torque	[Nm]	--	486	506	477	577	597
Emergency Stop Torque	[Nm]	--	748	796	790	938	970
No Load Running Torque	[Nm]	*1	5.83				
Nominal Input Speed	[rpm]	--	2,000				
Maximum Continuous Input Speed	[rpm]	--	2,000				
Maximum Cyclic Input Speed	[rpm]	--	3,000				
Maximum Radial Load	[N]	*2	9,780				
Maximum Axial Load	[N]	*3	5,780				
Moment of Inertia	[kgcm <sup>2</sup> ]	--	25.3	19.8	17.9	16.5	16.0
Efficiency	[%]	*4	94	93	92	90	87
Torsional Rigidity	[Nm/arcmin]	--	28.4				
Maximum Torsional Backlash	[Arc-min]	--	≤ 12				
Noise Level	[dBA]	*5	≤ 85				
Ambient Temperature	[°C]	--	-25 ~ 93				
Permitted Housing Temperature	[°C]	--	100				
Protection Class	--	--	IP55				
Lubrication	--	--	Synthetic Oil				
Service Life	[Hours]	--	25,000				
Weight	[kg]	*6	30				

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJM 011 1-Stage Specifications

Frame Size	011						
Stage	1-Stage						
Ratio	Unit	Note	25	30	40	50	60
Nominal Output Torque	[Nm]	--	474	505	455	427	407
Maximum Acceleration Torque	[Nm]	--	580	614	551	514	489
Emergency Stop Torque	[Nm]	--	948	1010	910	854	814
No Load Running Torque	[Nm]	*1	5.83				
Nominal Input Speed	[rpm]	--	2,000				
Maximum Continuous Input Speed	[rpm]	--	2,000				
Maximum Cyclic Input Speed	[rpm]	--	3,000				
Maximum Radial Load	[N]	*2	9,780				
Maximum Axial Load	[N]	*3	5,780				
Moment of Inertia	[kgcm <sup>2</sup> ]	--	15.8	15.7	15.6	15.5	15.5
Efficiency	[%]	*4	84	83	78	73	69
Torsional Rigidity	[Nm/arcmin]	--	28.4				
Maximum Torsional Backlash	[Arc-min]	--	≤ 12				
Noise Level	[dBA]	*5	≤ 85				
Ambient Temperature	[°C]	--	-25 ~ 93				
Permitted Housing Temperature	[°C]	--	100				
Protection Class	--	--	IP55				
Lubrication	--	--	Synthetic Oil				
Service Life	[Hours]	--	25,000				
Weight	[kg]	*6	30				

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

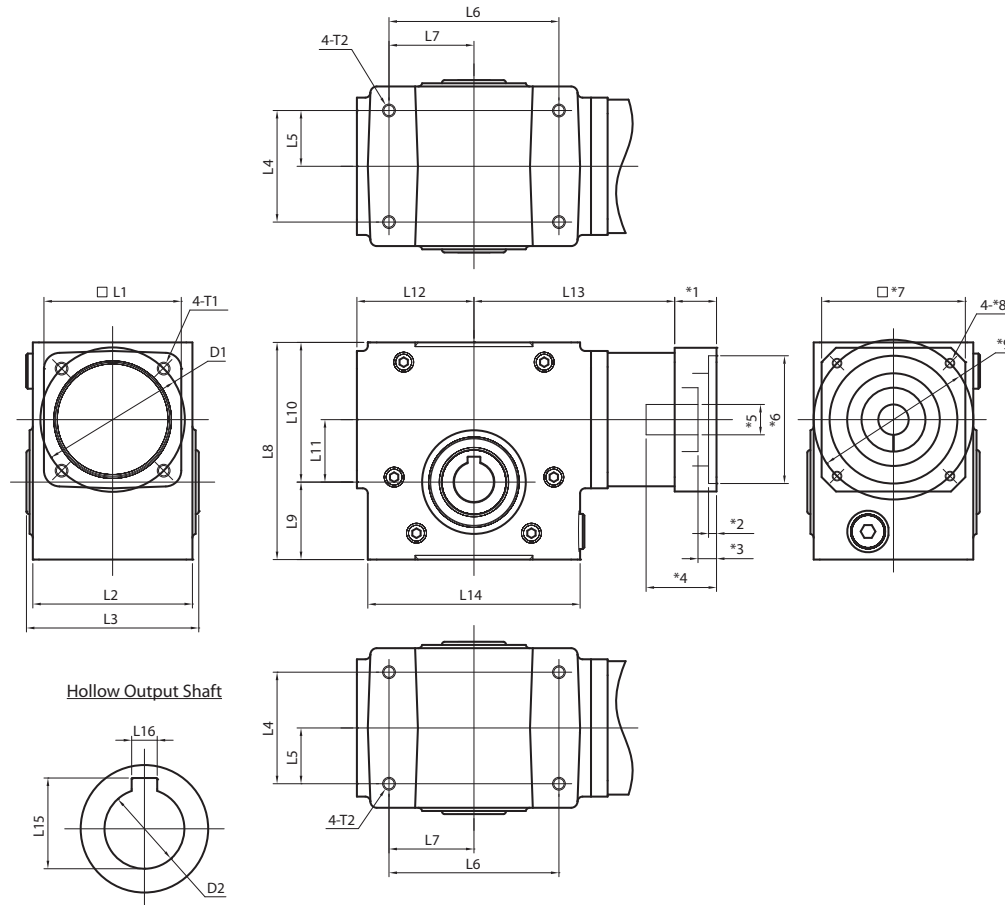
\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models



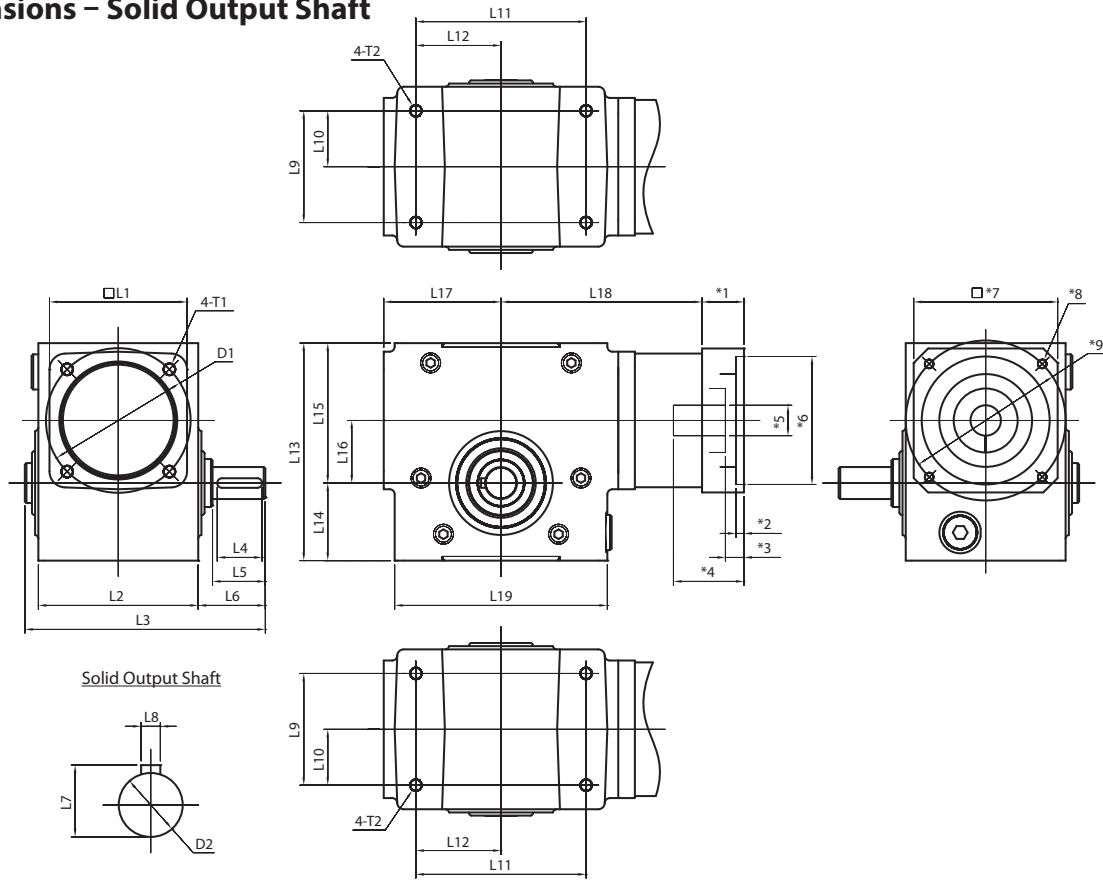
# EJM SERIES Right-angle Worm

## EJM Dimensions – Hollow Output Shaft



Frame Size	Unit	Note	EJM-002	EJM-003	EJM-005	EJM-006	EJM-009	EJM-011
L1	[mm]	--	60	86	86	86	116	116
L2	[mm]	--	70	100	100	100	130	130
L3	[mm]	--	98	108	107	108	138	169
L4	[mm]	--	51	70	73	73	102	102
L5	[mm]	--	25	35	37	37	51	51
L6	[mm]	--	83	106	127	127	178	191
L7	[mm]	--	41	53	64	64	89	95
L8	[mm]	--	118.5	136	162	176	225.5	250
L9	[mm]	--	43.5	48.5	58	63.5	82.5	86
L10	[mm]	--	75	87.5	104	112.5	143	164
L11	[mm]	--	33.8	39.1	50.0	60.5	76.2	89.9
L12	[mm]	--	67	73	84	95	117	130
L13	[mm]	--	126	126	136	147	184	197
L14	[mm]	--	110	133	152	178	229	241
L15	[mm]	--	23	28.5	38.5	38.5	59.5	80
L16	[mm]	--	6	8	10	10	16	20
D1	[mm]	--	ø64	ø90.5	ø90.5	ø90.5	ø127	ø127
D2 (H7)	[mm]	--	ø20	ø25	ø35	ø35	ø55	ø75
T1	[mm]	--	M8x12	M8x12	M8x12	M8x12	M8x12	M8x12
T2	[mm]	--	M8x12	M8x12	M10x15	M10x15	M12x18	M16x24
*1 ~	[mm]	*9	Motor attachment dimensions are made to fit your servo motor.					

## EJM Dimensions – Solid Output Shaft



Frame Size	Unit	Note	EJM-002	EJM-003	EJM-005	EJM-006	EJM-009	EJM-011
L1	[mm]	--	60	86	86	86	116	116
L2	[mm]	--	70	100	100	100	130	130
L3	[mm]	--	140.5	150.5	156	173	204	261
L4	[mm]	--	28	28	36	50	50	70
L5	[mm]	--	33	33	39	55	54	79
L6	[mm]	--	52	42	48	64	64	105
L7	[mm]	--	22.5	22.5	28	33	38	45
L8	[mm]	--	6	6	8	8	10	12
L9	[mm]	--	51	70	73	73	102	102
L10	[mm]	--	25.5	35	36.5	36.5	51	51
L11	[mm]	--	83	106	127	127	178	191
L12	[mm]	--	41.5	53	63.5	63.5	89	95.5
L13	[mm]	--	118.5	136	162	176	225.5	250
L14	[mm]	--	43.5	48.5	58	63.5	82.5	86
L15	[mm]	--	75	87.5	104	112.5	143	164
L16	[mm]	--	33.8	39.1	50.0	60.5	76.2	89.9
L17	[mm]	--	67	73.5	84	95	117	130
L18	[mm]	--	125.5	125.5	136.5	147.5	184	197
L19	[mm]	--	110	133	152.5	178	228.5	241.5
D1	[mm]	--	ø64	ø90.5	ø90.5	ø90.5	ø127	ø127
D2 (h6)	[mm]	--	ø20	ø20	ø25	ø30	ø35	ø42
T1	[mm]	--	M8 x12	M8 x12	M8 x12	M8 x12	M8 x12	M8 x12
T2	[mm]	--	M8 x12	M8 x12	M10 x15	M10 x15	M12 x18	M16 x24
*1 ~	[mm]	*9	Motor attachment dimensions are made to fit your servo motor.					



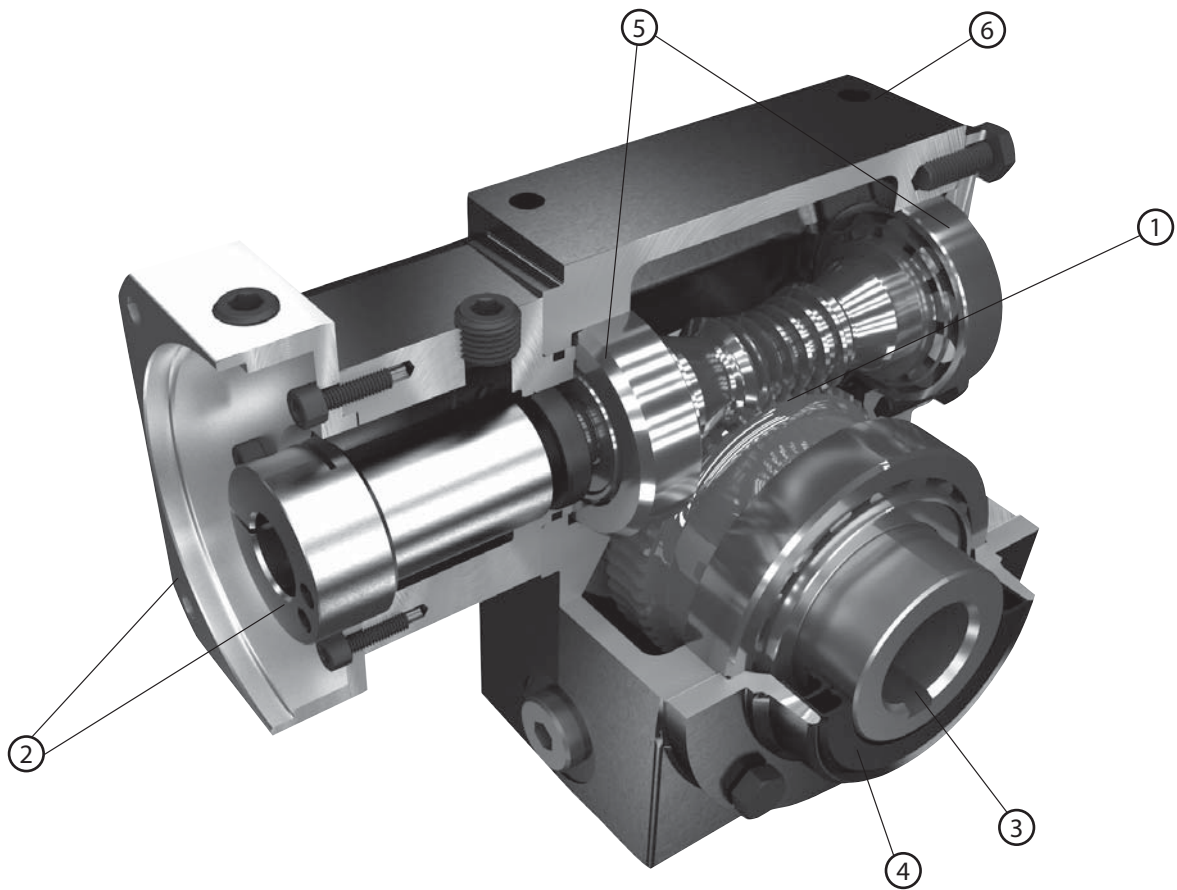


### EJH SERIES

- Compact design – exact reduction ratios from 5:1 – 60:1 available in a single stage
- Mid-range performance with backlash as low as 6 arc-min
- Robust cast iron housing design for heavy industry applications
- Five frame sizes to choose from with nominal output torque up to 475Nm

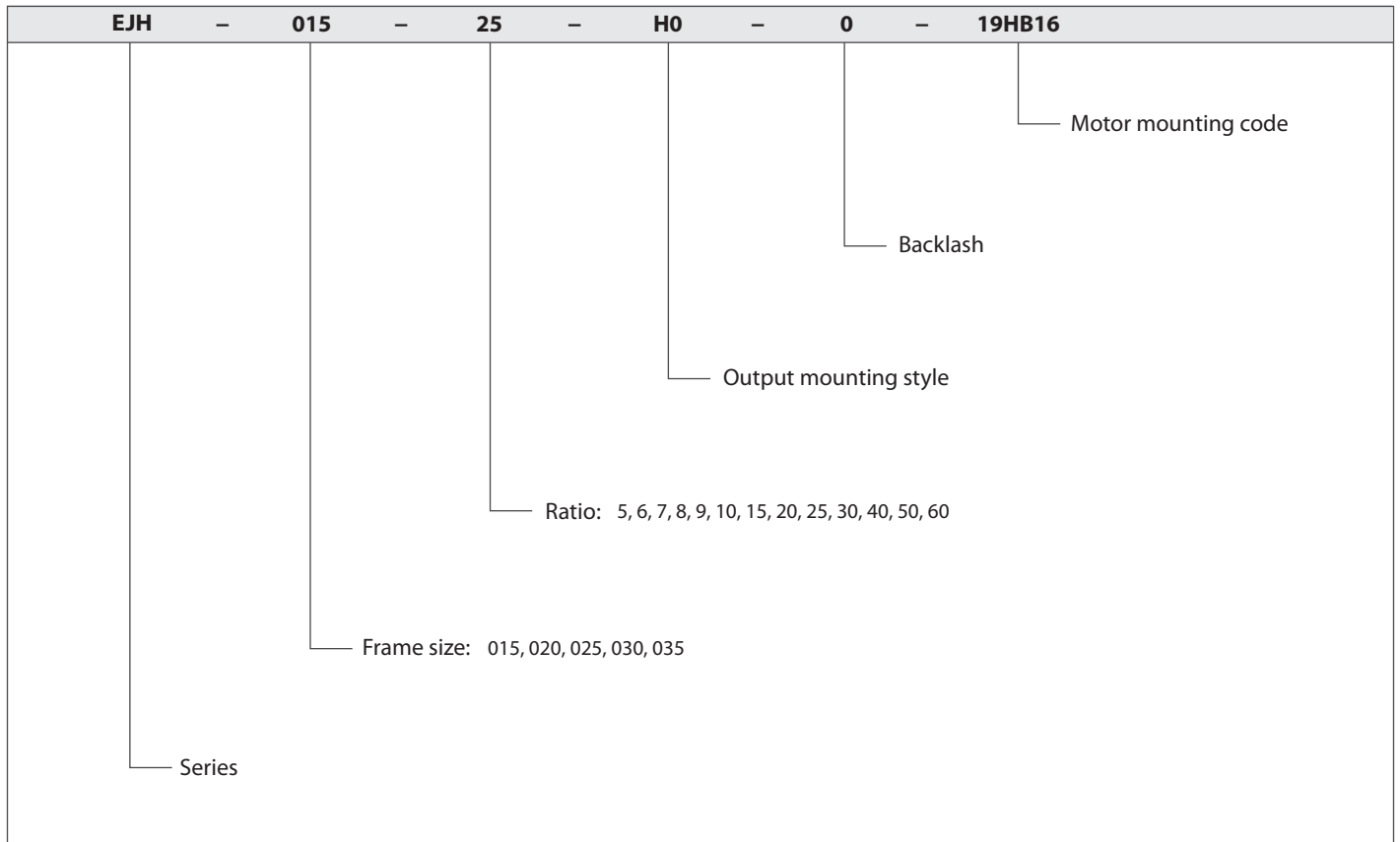
# EJH SERIES Right-angle Worm

## EJH Series Features



- ① Globoidal gear set – between 3-8 teeth in contact at once, allowing 300% shock load capacity
- ② Adapter-bushing connection allows simple mounting to virtually any servomotor manufacturer
- ③ Wide range of output mounting styles available—hollow shaft, solid shaft, flange mount, shrink disc
- ④ Double oil seal and o-ring provide IP65 protection
- ⑤ Tapered roller bearings provide high radial and thrust load capability
- ⑥ Cast iron housing for improved durability in heavy industrial applications

## EJH Series Model Code



EJH

## EJH 015 1-Stage Specifications

Frame Size	015								
Stage	1-Stage								
Ratio	Unit	Note	5	6	7	8	9	10	15
Nominal Output Torque	[Nm]	--	35	---	---	---	---	47	48
Maximum Acceleration Torque	[Nm]	--	46	---	---	---	---	59	61
Emergency Stop Torque	[Nm]	--	183	---	---	---	---	217	216
No Load Running Torque	[Nm]	*1	0.51						
Nominal Input Speed	[rpm]	--	2,000						
Maximum Continuous Input Speed	[rpm]	--	4,000						
Maximum Cyclic Input Speed	[rpm]	--	4,000						
Maximum Radial Load	[N]	*2	5,050						
Maximum Axial Load	[N]	*3	5,050						
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	0.75	---	---	---	---	0.59	0.56
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	0.95	---	---	---	---	0.79	0.76
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	2.13	---	---	---	---	1.97	1.94
Efficiency	[%]	*4	88	---	---	---	---	86	84
Torsional Rigidity	[Nm/arcmin]	--	10.3						
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 32$						
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 15$						
Noise Level	[dBA]	*5	$\leq 73$						
Ambient Temperature	[°C]	--	-25 ~ 100						
Permitted Housing Temperature	[°C]	--	100						
Protection Class	--	--	IP65						
Lubrication	--	--	Synthetic Oil						
Service Life	[Hours]	--	25,000						
Weight	[kg]	*6	7						

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJH 015 1-Stage Specifications

Frame Size	015							
Stage	1-Stage							
Ratio	Unit	Note	20	25	30	40	50	60
Nominal Output Torque	[Nm]	--	48	---	46	42	41	38
Maximum Acceleration Torque	[Nm]	--	59	---	57	52	51	48
Emergency Stop Torque	[Nm]	--	209	---	192	148	150	128
No Load Running Torque	[Nm]	*1	0.51					
Nominal Input Speed	[rpm]	--	2,000					
Maximum Continuous Input Speed	[rpm]	--	4,000					
Maximum Cyclic Input Speed	[rpm]	--	4,000					
Maximum Radial Load	[N]	*2	5,050					
Maximum Axial Load	[N]	*3	5,050					
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	0.54	---	0.54	0.53	0.53	0.53
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	0.74	---	0.74	0.73	0.73	0.73
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	1.92	---	1.92	1.91	1.91	1.91
Efficiency	[%]	*4	81	---	76	72	69	66
Torsional Rigidity	[Nm/arcmin]	--	10.3					
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 32$					
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 15$					
Noise Level	[dBA]	*5	$\leq 73$					
Ambient Temperature	[°C]	--	-25 ~ 100					
Permitted Housing Temperature	[°C]	--	100					
Protection Class	--	--	IP65					
Lubrication	--	--	Synthetic Oil					
Service Life	[Hours]	--	25,000					
Weight	[kg]	*6	7					

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models



## EJH 020 1-Stage Specifications

Frame Size	020								
Stage	1-Stage								
Ratio	Unit	Note	5	6	7	8	9	10	15
Nominal Output Torque	[Nm]	--	67	73	78	82	84	86	89
Maximum Acceleration Torque	[Nm]	--	90	99	105	111	113	115	120
Emergency Stop Torque	[Nm]	--	384	407	429	441	441	441	452
No Load Running Torque	[Nm]	*1	1.61						
Nominal Input Speed	[rpm]	--	2,000						
Maximum Continuous Input Speed	[rpm]	--	4,000						
Maximum Cyclic Input Speed	[rpm]	--	4,000						
Maximum Radial Load	[N]	*2	6,730						
Maximum Axial Load	[N]	*3	6,730						
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	1.52	1.28	1.14	1.04	0.98	0.94	0.83
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	1.72	1.48	1.34	1.24	1.18	1.14	1.03
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	2.89	2.66	2.52	2.42	2.36	2.31	2.21
Efficiency	[%]	*4	92	91	91	91	90	90	88
Torsional Rigidity	[Nm/arcmin]	--	17.8						
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 24$						
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 11$						
Noise Level	[dBA]	*5	$\leq 75$						
Ambient Temperature	[°C]	--	-25 ~ 100						
Permitted Housing Temperature	[°C]	--	100						
Protection Class	--	--	IP65						
Lubrication	--	--	Synthetic Oil						
Service Life	[Hours]	--	25,000						
Weight	[kg]	*6	12						

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJH 020 1-Stage Specifications

Frame Size	020							
Stage	1-Stage							
Ratio	Unit	Note	20	25	30	40	50	60
Nominal Output Torque	[Nm]	--	89	88	85	81	78	75
Maximum Acceleration Torque	[Nm]	--	116	116	112	106	102	98
Emergency Stop Torque	[Nm]	--	418	418	395	362	305	294
No Load Running Torque	[Nm]	*1	1.61					
Nominal Input Speed	[rpm]	--	2,000					
Maximum Continuous Input Speed	[rpm]	--	4,000					
Maximum Cyclic Input Speed	[rpm]	--	4,000					
Maximum Radial Load	[N]	*2	6,730					
Maximum Axial Load	[N]	*3	6,730					
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	0.79	0.77	0.76	0.75	0.75	0.75
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	0.99	0.97	0.96	0.95	0.95	0.95
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	2.17	2.15	2.14	2.13	2.13	2.13
Efficiency	[%]	*4	85	84	80	76	73	70
Torsional Rigidity	[Nm/arcmin]	--	17.8					
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 24$					
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 11$					
Noise Level	[dBA]	*5	$\leq 75$					
Ambient Temperature	[°C]	--	-25 ~ 100					
Permitted Housing Temperature	[°C]	--	100					
Protection Class	--	--	IP65					
Lubrication	--	--	Synthetic Oil					
Service Life	[Hours]	--	25,000					
Weight	[kg]	*6	12					

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJH 025 1-Stage Specifications

Frame Size	025										
Stage	1-Stage										
Ratio	Unit	Note	5	6	7	8	9	10	15		
Nominal Output Torque	[Nm]	--	120	133	140	148	151	155	161		
Maximum Acceleration Torque	[Nm]	--	167	184	194	205	209	214	222		
Emergency Stop Torque	[Nm]	--	746	802	825	859	870	881	881		
No Load Running Torque	[Nm]	*1	2.72								
Nominal Input Speed	[rpm]	--	2,000								
Maximum Continuous Input Speed	[rpm]	--	4,000								
Maximum Cyclic Input Speed	[rpm]	--	4,000								
Maximum Radial Load	[N]	*2	9,210								
Maximum Axial Load	[N]	*3	9,210								
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	5.42	4.66	4.20	3.90	3.69	3.54	3.20		
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	6.24	5.48	5.02	4.72	4.51	4.36	4.02		
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	11.8	11.1	10.6	10.3	10.1	9.94	9.60		
Efficiency	[%]	*4	92	92	91	91	90	90	88		
Torsional Rigidity	[Nm/arcmin]	--	23.1								
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 19$								
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 9$								
Noise Level	[dBA]	*5	$\leq 80$								
Ambient Temperature	[°C]	--	-25 ~ 100								
Permitted Housing Temperature	[°C]	--	100								
Protection Class	--	--	IP65								
Lubrication	--	--	Synthetic Oil								
Service Life	[Hours]	--	25,000								
Weight	[kg]	*6	20								

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJH 025 1-Stage Specifications

Frame Size	025							
Stage	1-Stage							
Ratio	Unit	Note	20	25	30	40	50	60
Nominal Output Torque	[Nm]	--	159	159	152	145	140	134
Maximum Acceleration Torque	[Nm]	--	217	217	208	198	191	183
Emergency Stop Torque	[Nm]	--	847	791	780	678	621	610
No Load Running Torque	[Nm]	*1	2.72					
Nominal Input Speed	[rpm]	--	2,000					
Maximum Continuous Input Speed	[rpm]	--	4,000					
Maximum Cyclic Input Speed	[rpm]	--	4,000					
Maximum Radial Load	[N]	*2	9,210					
Maximum Axial Load	[N]	*3	9,210					
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	3.07	3.02	2.99	2.96	2.94	2.93
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	3.89	3.84	3.81	3.78	3.76	3.75
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	9.47	9.42	9.39	9.36	9.34	9.33
Efficiency	[%]	*4	85	84	80	76	73	70
Torsional Rigidity	[Nm/arcmin]	--	23.1					
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 19$					
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 9$					
Noise Level	[dBA]	*5	$\leq 80$					
Ambient Temperature	[°C]	--	-25 ~ 100					
Permitted Housing Temperature	[°C]	--	100					
Protection Class	--	--	IP65					
Lubrication	--	--	Synthetic Oil					
Service Life	[Hours]	--	25,000					
Weight	[kg]	*6	20					

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJH 030 1-Stage Specifications

Frame Size	030								
Stage	1-Stage								
Ratio	Unit	Note	5	6	7	8	9	10	15
Nominal Output Torque	[Nm]	--	196	219	233	248	255	264	275
Maximum Acceleration Torque	[Nm]	--	275	306	324	345	355	367	381
Emergency Stop Torque	[Nm]	--	1,311	1,424	1,480	1,548	1,548	1,559	1,570
No Load Running Torque	[Nm]	*1	3.46						
Nominal Input Speed	[rpm]	--	2,000						
Maximum Continuous Input Speed	[rpm]	--	4,000						
Maximum Cyclic Input Speed	[rpm]	--	4,000						
Maximum Radial Load	[N]	*2	10,980						
Maximum Axial Load	[N]	*3	10,980						
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	13.3	11.1	9.80	8.94	8.35	7.92	6.92
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	16.2	14.0	12.7	11.8	11.2	10.8	9.78
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	19.9	17.7	16.3	15.5	14.9	14.5	13.5
Efficiency	[%]	*4	92	92	91	91	90	89	88
Torsional Rigidity	[Nm/arcmin]	--	41.6						
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 16$						
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 7$						
Noise Level	[dBA]	*5	$\leq 80$						
Ambient Temperature	[°C]	--	-25 ~ 100						
Permitted Housing Temperature	[°C]	--	100						
Protection Class	--	--	IP65						
Lubrication	--	--	Synthetic Oil						
Service Life	[Hours]	--	25,000						
Weight	[kg]	*6	35						

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJH 030 1-Stage Specifications

Frame Size	030							
Stage	1-Stage							
Ratio	Unit	Note	20	25	30	40	50	60
Nominal Output Torque	[Nm]	--	272	272	260	248	239	230
Maximum Acceleration Torque	[Nm]	--	373	373	357	341	328	315
Emergency Stop Torque	[Nm]	--	1,503	1,435	1,390	1,254	1,096	1,085
No Load Running Torque	[Nm]	*1	3.46					
Nominal Input Speed	[rpm]	--	2,000					
Maximum Continuous Input Speed	[rpm]	--	4,000					
Maximum Cyclic Input Speed	[rpm]	--	4,000					
Maximum Radial Load	[N]	*2	10,980					
Maximum Axial Load	[N]	*3	10,980					
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	6.57	6.41	6.32	6.24	6.19	6.17
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	9.43	9.27	9.18	9.10	9.05	9.03
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	13.1	13.0	12.9	12.8	12.7	12.7
Efficiency	[%]	*4	85	84	80	76	73	70
Torsional Rigidity	[Nm/arcmin]	--	41.6					
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 16$					
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 7$					
Noise Level	[dBA]	*5	$\leq 80$					
Ambient Temperature	[°C]	--	-25 ~ 100					
Permitted Housing Temperature	[°C]	--	100					
Protection Class	--	--	IP65					
Lubrication	--	--	Synthetic Oil					
Service Life	[Hours]	--	25,000					
Weight	[kg]	*6	35					

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJH 035 1-Stage Specifications

Frame Size	035								
Stage	1-Stage								
Ratio	Unit	Note	5	6	7	8	9	10	15
Nominal Output Torque	[Nm]	--	341	381	404	430	442	456	475
Maximum Acceleration Torque	[Nm]	--	480	537	568	604	619	638	663
Emergency Stop Torque	[Nm]	--	2,423	2,644	2,731	2,845	2,864	2,889	2,885
No Load Running Torque	[Nm]	*1	4.20						
Nominal Input Speed	[rpm]	--	2,000						
Maximum Continuous Input Speed	[rpm]	--	4,000						
Maximum Cyclic Input Speed	[rpm]	--	4,000						
Maximum Radial Load	[N]	*2	18,170						
Maximum Axial Load	[N]	*3	18,170						
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	28.3	23.9	21.2	19.5	18.3	17.4	15.4
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	32.3	27.8	25.2	23.4	22.2	21.4	19.4
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	36.9	32.5	29.8	28.1	26.9	26.0	24.0
Efficiency	[%]	*4	91	91	91	90	90	89	87
Torsional Rigidity	[Nm/arcmin]	--	79.2						
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 15$						
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 6$						
Noise Level	[dBA]	*5	$\leq 83$						
Ambient Temperature	[°C]	--	-25 ~ 100						
Permitted Housing Temperature	[°C]	--	100						
Protection Class	--	--	IP65						
Lubrication	--	--	Synthetic Oil						
Service Life	[Hours]	--	25,000						
Weight	[kg]	*6	53						

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJH 035 1-Stage Specifications

Frame Size	035							
Stage	1-Stage							
Ratio	Unit	Note	20	25	30	40	50	60
Nominal Output Torque	[Nm]	--	471	468	450	429	413	397
Maximum Acceleration Torque	[Nm]	--	649	649	622	593	571	548
Emergency Stop Torque	[Nm]	--	2,819	2,691	2,570	2,293	2,076	2,037
No Load Running Torque	[Nm]	*1	4.20					
Nominal Input Speed	[rpm]	--	2,000					
Maximum Continuous Input Speed	[rpm]	--	4,000					
Maximum Cyclic Input Speed	[rpm]	--	4,000					
Maximum Radial Load	[N]	*2	18,170					
Maximum Axial Load	[N]	*3	18,170					
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	14.7	14.4	14.2	14.0	13.9	13.9
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	18.7	18.3	18.1	18.0	17.9	17.8
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	23.3	23.0	22.8	22.6	22.5	22.5
Efficiency	[%]	*4	84	83	79	75	72	69
Torsional Rigidity	[Nm/arcmin]	--	79.2					
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 15$					
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 6$					
Noise Level	[dBA]	*5	$\leq 83$					
Ambient Temperature	[°C]	--	-25 ~ 100					
Permitted Housing Temperature	[°C]	--	100					
Protection Class	--	--	IP65					
Lubrication	--	--	Synthetic Oil					
Service Life	[Hours]	--	25,000					
Weight	[kg]	*6	53					

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

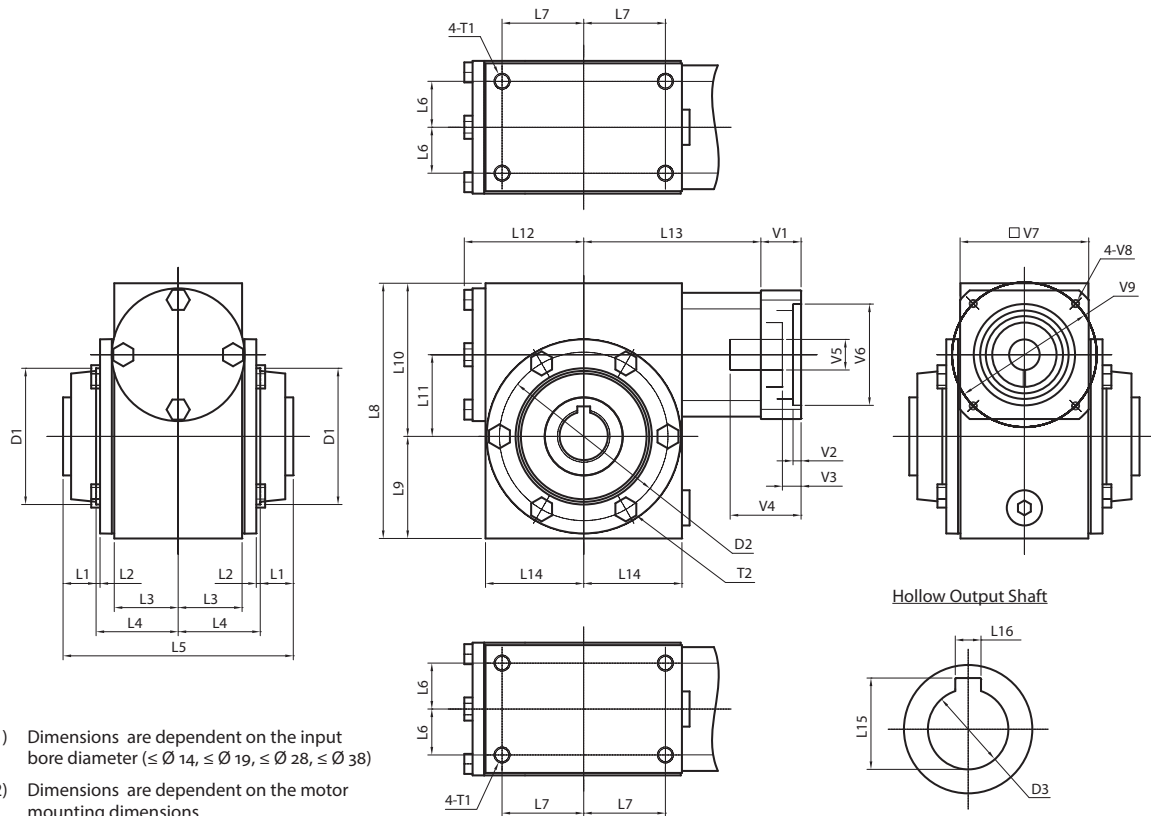
\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models



# EJH SERIES Right-angle Worm

## EJH Dimensions – Hollow Output Shaft

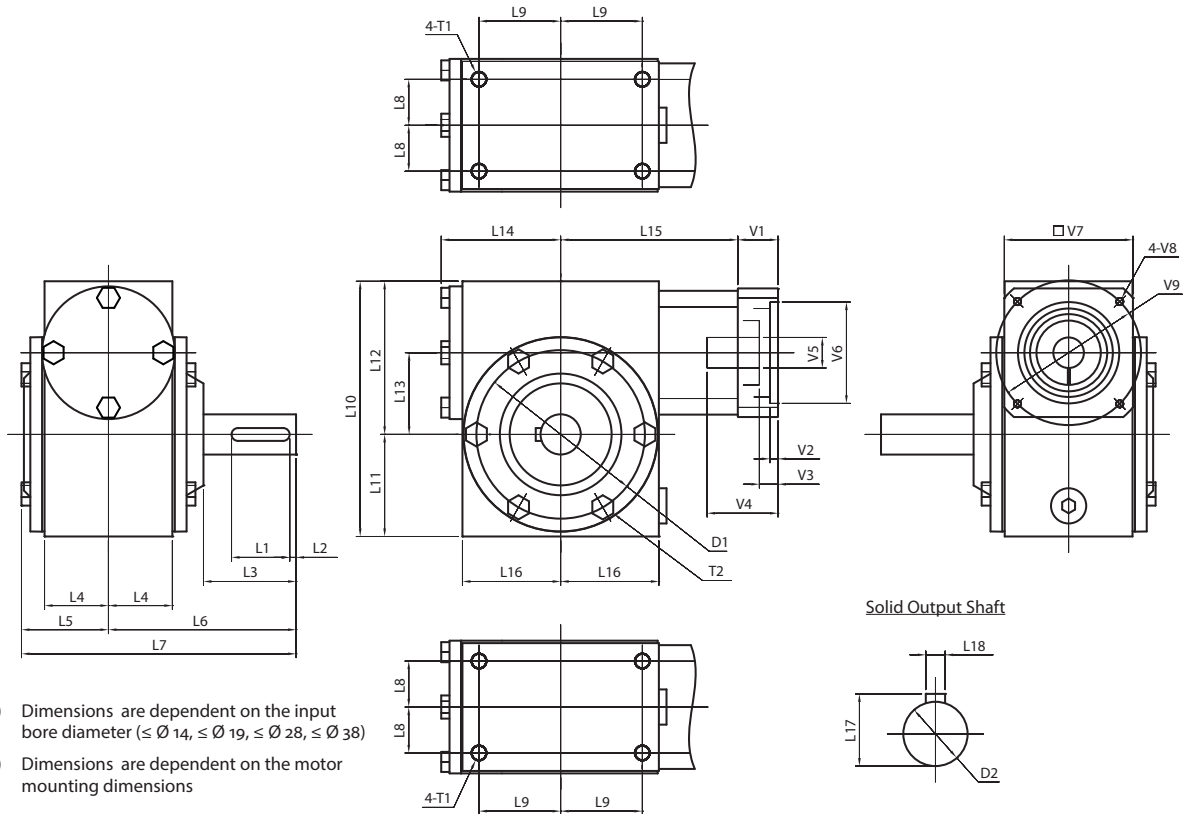


\*1) Dimensions are dependent on the input bore diameter ( $\leq \varnothing 14$ ,  $\leq \varnothing 19$ ,  $\leq \varnothing 28$ ,  $\leq \varnothing 38$ )

\*2) Dimensions are dependent on the motor mounting dimensions

Frame Size	Unit	Note	EJH-015	EJH-020	EJH-025	EJH-030	EJH-035
L1	[mm]	--	6.5	15.5	13.5	21.5	15
L2	[mm]	--	3.5	2.5	3	3.5	5
L3	[mm]	--	42	40	49	65	87
L4	[mm]	--	52.5	51	60.5	78.5	102
L5	[mm]	--	118	134	148	200	234
L6	[mm]	--	33.5	28.5	38	49	71.5
L7	[mm]	--	36.5	51	65	81	97
L8	[mm]	--	121	159	191	230	262
L9	[mm]	--	41.5	63.5	76	92	108
L10	[mm]	--	79.5	95.5	115	138	154
L11	[mm]	--	38.1	50.8	63.5	76.2	88.9
L12	[mm]	--	55	73	93	115	131
L13	[mm]	*1	95.5 - 105.5	113.5 - 123.5	137.5 - 149.5	156 - 168	174.5 - 186.5
L14	[mm]	--	45	61	79	98	113
L15	[mm]	--	28.5	33.5	38.5	49	64.5
L16	[mm]	--	8	8	10	14	18
D1 ±0.03	[mm]	--	ø63.45	ø84.73	ø107.11	ø135.69	ø134.26
D2	[mm]	--	ø79.5	ø105	ø125.5	ø155.5	ø184
D3 (H7)	[mm]	--	ø25	ø30	ø35	ø45	ø60
T1	[mm]	--	4xM8x12	4xM10x15	4xM10x15	4xM12x18	4xM12x18
T2	[mm]	--	4xM6 Bolts	4xM8 Bolts	8xM8 Bolts	6xM10 Bolts	6xM10 Bolts
V1 ~ V9	[mm]	*2	Motor attachment dimensions are made to fit your servo motor.				

## EJH Dimensions – Solid Output Shaft

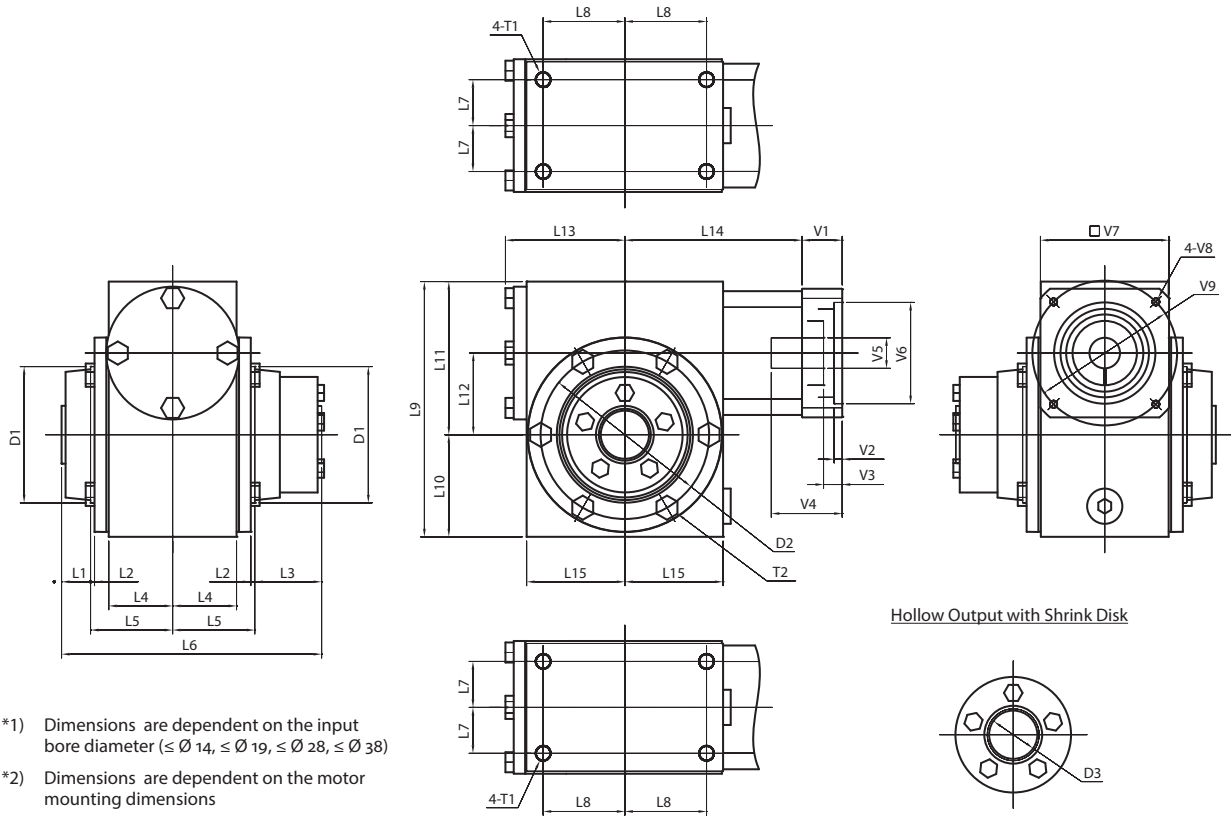


- \*1) Dimensions are dependent on the input bore diameter ( $\leq \varnothing 14$ ,  $\leq \varnothing 19$ ,  $\leq \varnothing 28$ ,  $\leq \varnothing 38$ )
- \*2) Dimensions are dependent on the motor mounting dimensions

Frame Size	Unit	Note	EJH-015	EJH-020	EJH-025	EJH-030	EJH-035
L1	[mm]	--	22	36	40	50	63
L2	[mm]	--	4	4	3	3	5
L3	[mm]	--	32.5	57.5	55	85.5	97.5
L4	[mm]	--	42	40	49	65	87
L5	[mm]	--	53	54.5	65.5	84	106.5
L6	[mm]	--	89	117.5	121.5	168.5	209.5
L7	[mm]	--	142	172	187	252.5	316
L8	[mm]	--	33.5	28.5	38	49	71.5
L9	[mm]	--	36.5	51	65	81	97
L10	[mm]	--	121	159	191	230	262
L11	[mm]	--	41.5	63.5	76	92	108
L12	[mm]	--	79.5	95.5	115	138	154
L13	[mm]	--	38.1	50.8	63.5	76.2	88.9
L14	[mm]	--	55	73	93	115	131
L15	[mm]	*1	95.5 - 105.5	113.5 - 123.5	137.5 - 149.5	156 - 168	174.5 - 186.5
L16	[mm]	--	45	61	79	98	113
L17	[mm]	--	22.5	28	33	41	48.5
L18	[mm]	--	6	8	8	10	14
D1	[mm]	--	$\varnothing 79.5$	$\varnothing 105$	$\varnothing 125.5$	$\varnothing 155.5$	$\varnothing 184$
D2 (k6)	[mm]	--	$\varnothing 20$	$\varnothing 25$	$\varnothing 30$	$\varnothing 38$	$\varnothing 45$
T1	[mm]	--	4xM8x12	4xM10x15	4xM10x15	4xM12x18	4xM12x18
T2	[mm]	--	4xM6 Bolts	4xM8 Bolts	8xM8 Bolts	6xM10 Bolts	6xM10 Bolts
V1 ~ V9	[mm]	*2	Motor attachment dimensions are made to fit your servo motor.				

# EJH SERIES Right-angle Worm

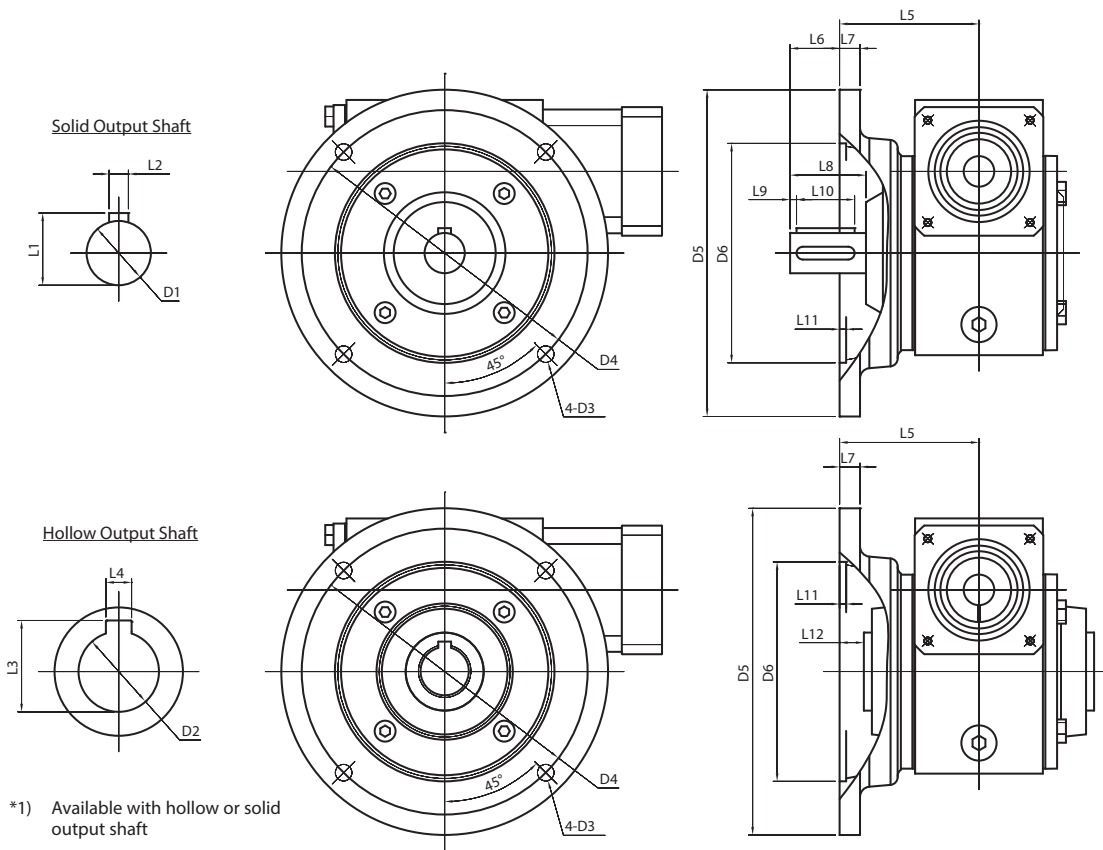
## EJH Dimensions – Hollow Output with Shrink Disk



- \*1) Dimensions are dependent on the input bore diameter ( $\leq \varnothing 14$ ,  $\leq \varnothing 19$ ,  $\leq \varnothing 28$ ,  $\leq \varnothing 38$ )
- \*2) Dimensions are dependent on the motor mounting dimensions

Frame Size	Unit	Note	EJH-015	EJH-020	EJH-025	EJH-030	EJH-035
L1	[mm]	--	6.5	15.5	13.5	21.5	15
L2	[mm]	--	3.5	2.5	3	3.5	5
L3	[mm]	--	30.5	41.5	48.5	56.5	57
L4	[mm]	--	42	40	49	65	87
L5	[mm]	--	52.5	51	60.5	78.5	101
L6	[mm]	--	141.5	159.5	183	235	271
L7	[mm]	--	33.5	28.5	38	49	71.5
L8	[mm]	--	36.5	51	65	81	97
L9	[mm]	--	121	159	191	230	262
L10	[mm]	--	41.5	63.5	76	92	108
L11	[mm]	--	79.5	95.5	115	138	154
L12	[mm]	--	38.1	50.8	63.5	76.2	88.9
L13	[mm]	--	55	73	93	115	131
L14	[mm]	*1	95.5 - 105.5	113.5 - 123.5	137.5 - 149.5	156 - 168	174.5 - 186.5
L15	[mm]	--	45	61	79	98	113
D1 $\pm 0.03$	[mm]	--	$\varnothing 63.45$	$\varnothing 84.73$	$\varnothing 107.11$	$\varnothing 135.69$	$\varnothing 134.26$
D2	[mm]	--	$\varnothing 79.5$	$\varnothing 105$	$\varnothing 125.5$	$\varnothing 155.5$	$\varnothing 184$
D3 (H7)	[mm]	--	$\varnothing 25$	$\varnothing 30$	$\varnothing 35$	$\varnothing 45$	$\varnothing 60$
T1	[mm]	--	4xM8x12	4xM10x15	4xM10x15	4xM12x18	4xM12x18
T2	[mm]	--	4xM6 Bolts	4xM8 Bolts	8xM8 Bolts	6xM10 Bolts	6xM10 Bolts
V1 ~ V9	[mm]	*2	Motor attachment dimensions are made to fit your servo motor.				

## EJH Dimensions – Optional Mounting Flange (\*1)

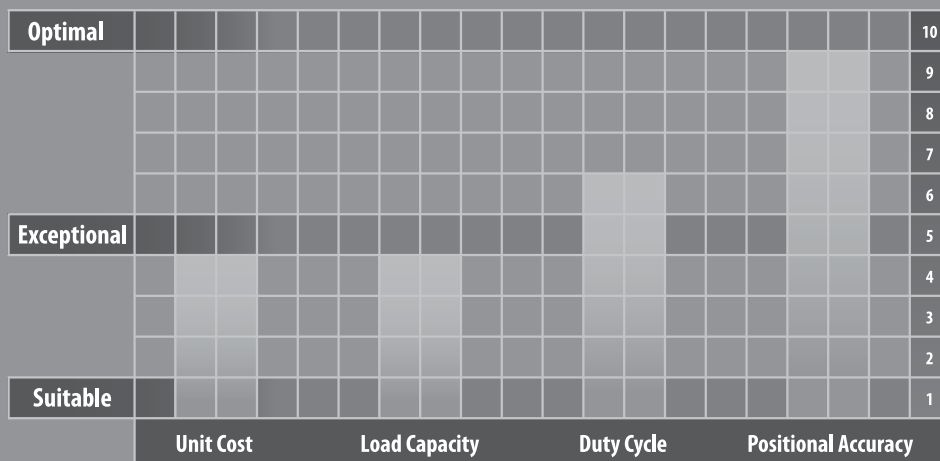


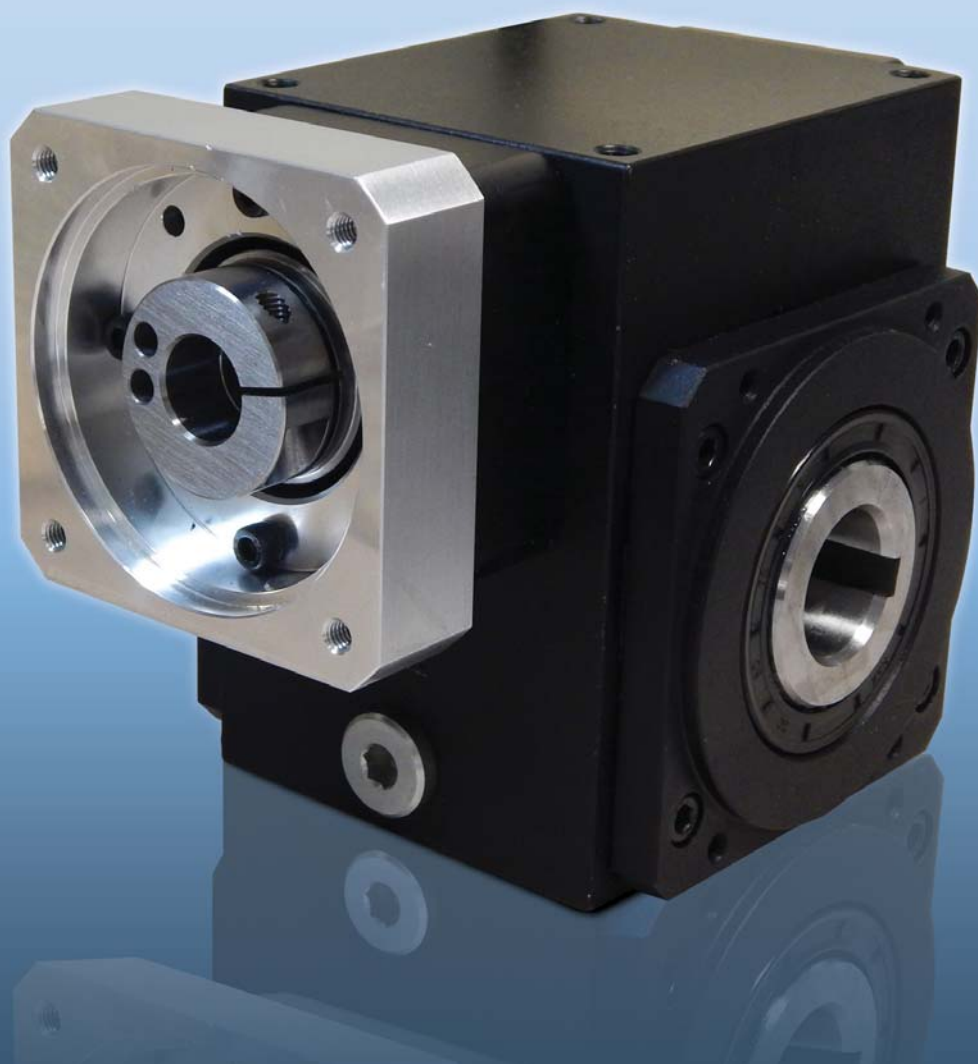
Frame Size	Unit	Note	EJH-015	EJH-020	EJH-025	EJH-030	EJH-035
L1	[mm]	--	22.5	28	33	41	48.5
L2	[mm]	--	6	8	8	10	14
L3	[mm]	--	28.5	33.5	38.5	49	64.5
L4	[mm]	--	8	8	10	14	18
L5	[mm]	--	86	87	89	111	129
L6	[mm]	--	2.5	31	32	58	80.5
L7	[mm]	--	10	13	13	13	13
L8	[mm]	--	32.5	57.5	55.0	85.5	97.5
L9	[mm]	--	4	4	3	3	5
L10	[mm]	--	22	36	40	50	63
L11	[mm]	--	4	4	5	7	7
L12	[mm]	--	27.5	20	15.5	10.5	12
D1 (k6)	[mm]	--	ø20	ø25	ø30	ø38	ø45
D2 (H7)	[mm]	--	ø25	ø30	ø35	ø45	ø60
D3	[mm]	--	ø10	ø10	ø12	ø14	ø14
D4	[mm]	--	ø149	ø178	ø210	ø241	ø267
D5	[mm]	--	ø168	ø203	ø235	ø267	ø298
D6 ±0.03	[mm]	--	ø114.30	ø136.55	ø168.30	ø196.88	ø222.28

## EJP SERIES

The EJP series is ideal for demanding applications requiring high efficiency, torsional rigidity and zero backlash. It's lightweight, black anodized aluminum housing and dual input/output seals allow for excellent environmental protection with minimal maintenance. The EJP is part of our modular design platform, which means it can be mounted to any servomotor manufacturer with ease.

Our internal design captures both sides of the gear tooth to completely eliminate backlash and guarantee it for the life of the product. Exact reduction ratios allow for simplified servo tuning. Ratios 5:1 through 60:1 are available in a single stage, resulting in a more compact design. The face mounting option gives customers the ability to directly attach components such as tables, pinion gears and timing belt pulleys, eliminating the need for couplings.



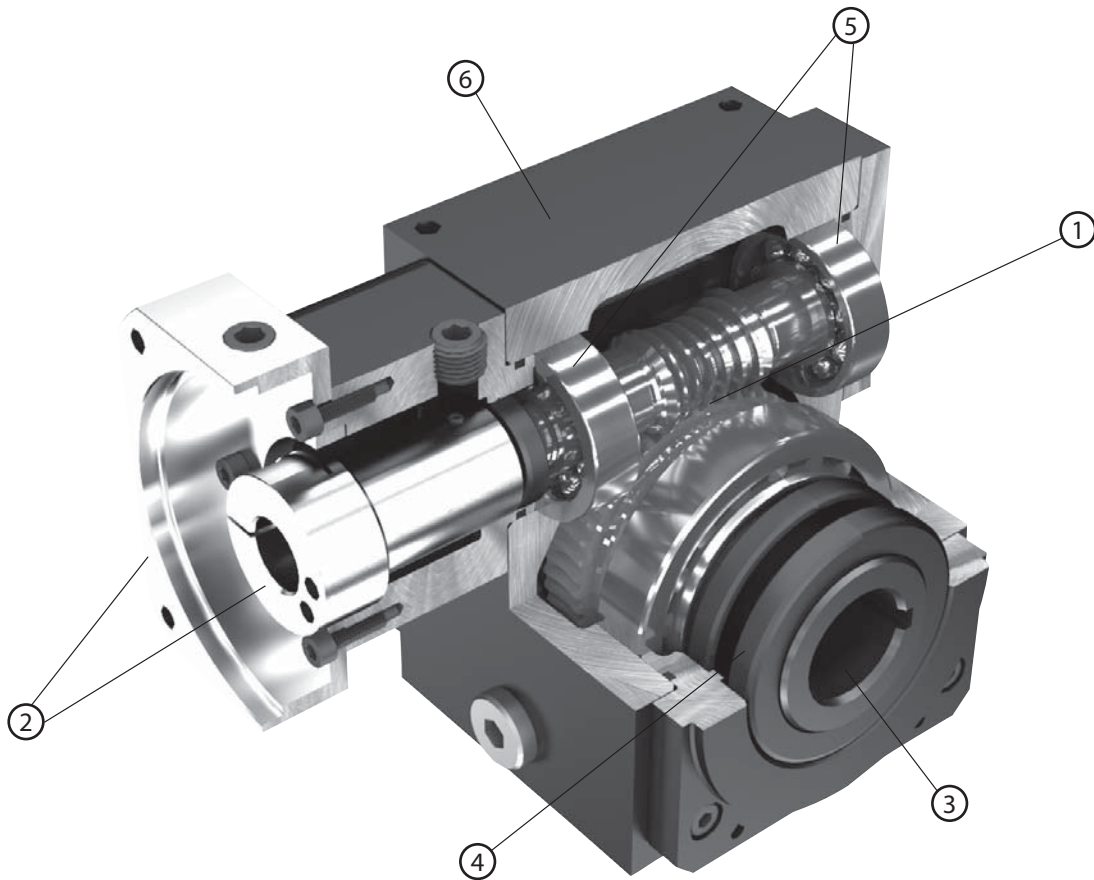


### EJP SERIES

- Performance leader in its category
- High positional accuracy and torsional rigidity combined with low noise and exceptionally smooth operation. Zero backlash available
- Wide range of output mounting options
- Compact design – up to 60:1 available in a single stage configuration

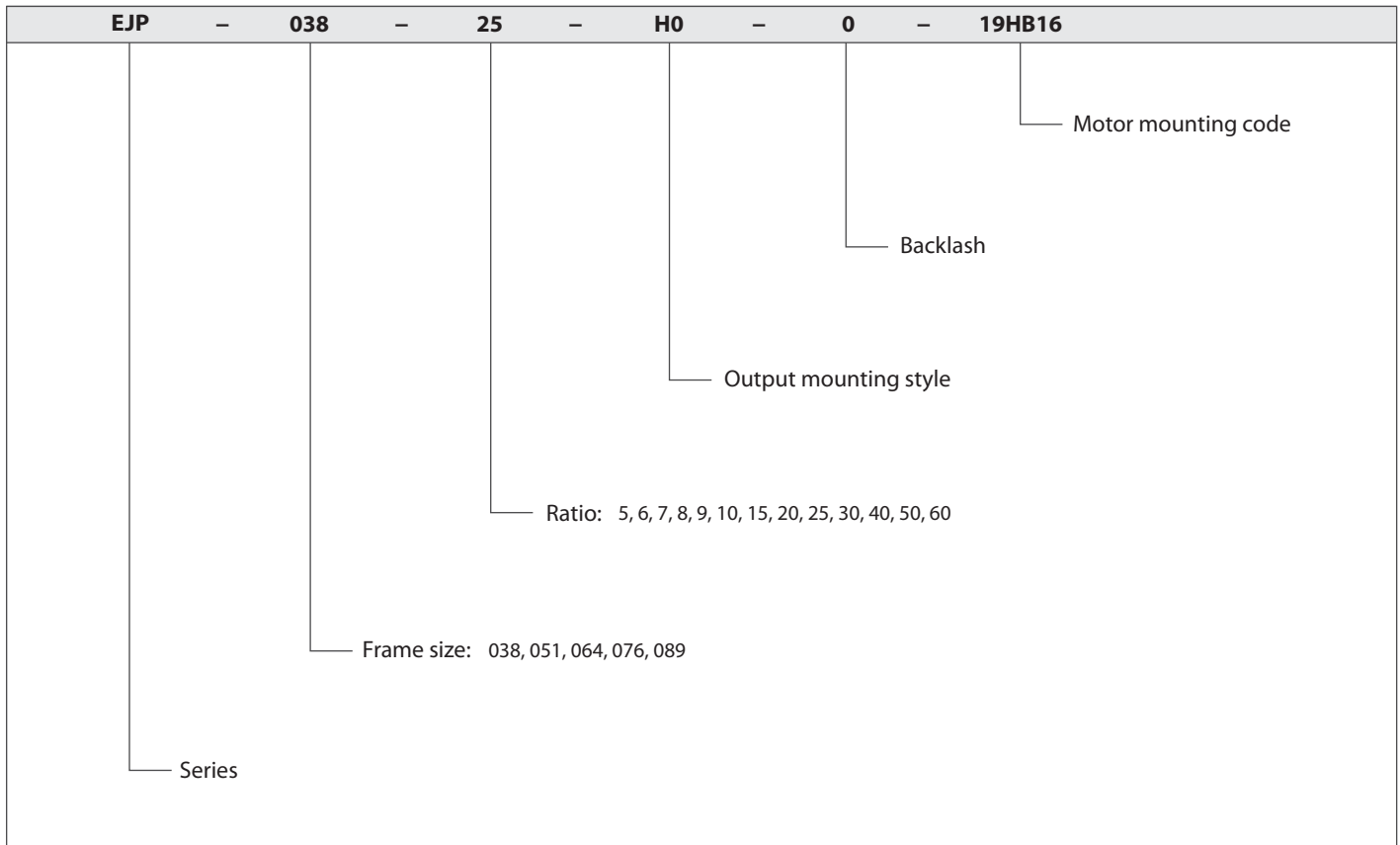
# EJP SERIES Right-angle Worm

## EJP Series Features



- ① Globoidal gear set – between 3-8 teeth in contact at once, allowing 300% shock load capacity
- ② Adapter-bushing connection allows simple mounting to virtually any servomotor manufacturer
- ③ Wide range of output mounting styles available – hollow shaft, solid shaft, face mount, shrink disc
- ④ Double oil seal and o-ring provide IP65 protection
- ⑤ Ball bearings help reduce friction and heat
- ⑥ Anodized, thermally efficient aluminum housing

## EJP Series Model Code



EJP



# EJP SERIES Right-angle Worm

## EJP 038 1-Stage Specifications

Frame Size	038								
Stage	1-Stage								
Ratio	Unit	Note	5	6	7	8	9	10	15
Nominal Output Torque	[Nm]	--	35	---	---	---	---	46	49
Maximum Acceleration Torque	[Nm]	--	46	---	---	---	---	59	61
Emergency Stop Torque	[Nm]	--	105	---	---	---	---	138	147
No Load Running Torque	[Nm]	*1	0.51						
Nominal Input Speed	[rpm]	--	2,000						
Maximum Continuous Input Speed	[rpm]	--	4,000						
Maximum Cyclic Input Speed	[rpm]	--	6,000						
Maximum Radial Load	[N]	*2	5,050						
Maximum Axial Load	[N]	*3	5,050						
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	0.75	---	---	---	---	0.59	0.56
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	0.95	---	---	---	---	0.79	0.76
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	2.13	---	---	---	---	1.97	1.94
Efficiency	[%]	*4	88	---	---	---	---	86	84
Torsional Rigidity	[Nm/arcmin]	--	3.8						
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 24$						
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 8$						
Maximum Torsional Backlash (Zero)	[Arc-min]	--	$\leq$ ---						
Noise Level	[dBA]	*5	$\leq 73$						
Ambient Temperature	[°C]	--	-25 ~ 100						
Permitted Housing Temperature	[°C]	--	100						
Protection Class	--	--	IP65						
Lubrication	--	--	Synthetic Oil						
Service Life	[Hours]	--	25,000						
Weight	[kg]	*6	4.1						

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJP 038 1-Stage Specifications

Frame Size	038							
Stage	1-Stage							
Ratio	Unit	Note	20	25	30	40	50	60
Nominal Output Torque	[Nm]	--	47	---	46	42	42	38
Maximum Acceleration Torque	[Nm]	--	60	---	56	52	52	47
Emergency Stop Torque	[Nm]	--	141	---	138	126	126	114
No Load Running Torque	[Nm]	*1	0.51					
Nominal Input Speed	[rpm]	--	2,000					
Maximum Continuous Input Speed	[rpm]	--	4,000					
Maximum Cyclic Input Speed	[rpm]	--	6,000					
Maximum Radial Load	[N]	*2	5,050					
Maximum Axial Load	[N]	*3	5,050					
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	0.54	---	0.54	0.53	0.53	0.53
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	0.74	---	0.74	0.73	0.73	0.73
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	1.92	---	1.92	1.91	1.91	1.91
Efficiency	[%]	*4	81	---	76	72	69	66
Torsional Rigidity	[Nm/arcmin]	--	3.8					
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 24$					
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 8$					
Maximum Torsional Backlash (Zero)	[Arc-min]	--	$\leq$ ---					
Noise Level	[dBA]	*5	$\leq 73$					
Ambient Temperature	[°C]	--	-25 ~ 100					
Permitted Housing Temperature	[°C]	--	100					
Protection Class	--	--	IP65					
Lubrication	--	--	Synthetic Oil					
Service Life	[Hours]	--	25,000					
Weight	[kg]	*6	4.1					

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

# EJP SERIES Right-angle Worm

## EJP 051 1-Stage Specifications

Frame Size	051										
Stage	1-Stage										
Ratio	Unit	Note	5	6	7	8	9	10	15		
Nominal Output Torque	[Nm]	--	67	75	78	82	85	87	90		
Maximum Acceleration Torque	[Nm]	--	90	99	110	110	110	120	120		
Emergency Stop Torque	[Nm]	--	201	225	234	246	255	261	270		
No Load Running Torque	[Nm]	*1	1.61								
Nominal Input Speed	[rpm]	--	2,000								
Maximum Continuous Input Speed	[rpm]	--	4,000								
Maximum Cyclic Input Speed	[rpm]	--	6,000								
Maximum Radial Load	[N]	*2	6,730								
Maximum Axial Load	[N]	*3	6,730								
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	1.52	1.28	1.14	1.04	0.98	0.94	0.83		
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	1.72	1.48	1.34	1.24	1.18	1.14	1.03		
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	2.89	2.66	2.52	2.42	2.36	2.31	2.21		
Efficiency	[%]	*4	92	91	91	91	90	90	88		
Torsional Rigidity	[Nm/arcmin]	--	7.6								
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 15$								
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 6$								
Maximum Torsional Backlash (Zero)	[Arc-min]	--	$\leq 0$								
Noise Level	[dBA]	*5	$\leq 75$								
Ambient Temperature	[°C]	--	-25 ~ 100								
Permitted Housing Temperature	[°C]	--	100								
Protection Class	--	--	IP65								
Lubrication	--	--	Synthetic Oil								
Service Life	[Hours]	--	25,000								
Weight	[kg]	*6	8.2								

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJP 051 1-Stage Specifications

Frame Size	051							
Stage	1-Stage							
Ratio	Unit	Note	20	25	30	40	50	60
Nominal Output Torque	[Nm]	--	88	89	86	81	78	75
Maximum Acceleration Torque	[Nm]	--	120	120	110	110	100	100
Emergency Stop Torque	[Nm]	--	264	267	258	243	234	225
No Load Running Torque	[Nm]	*1	1.61					
Nominal Input Speed	[rpm]	--	2,000					
Maximum Continuous Input Speed	[rpm]	--	4,000					
Maximum Cyclic Input Speed	[rpm]	--	6,000					
Maximum Radial Load	[N]	*2	6,730					
Maximum Axial Load	[N]	*3	6,730					
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	0.79	0.77	0.76	0.75	0.75	0.75
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	0.99	0.97	0.96	0.95	0.95	0.95
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	2.17	2.15	2.14	2.13	2.13	2.13
Efficiency	[%]	*4	85	84	80	76	73	70
Torsional Rigidity	[Nm/arcmin]	--	7.6					
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 15$					
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 6$					
Maximum Torsional Backlash (Zero)	[Arc-min]	--	$\leq 0$					
Noise Level	[dBA]	*5	$\leq 75$					
Ambient Temperature	[°C]	--	-25 ~ 100					
Permitted Housing Temperature	[°C]	--	100					
Protection Class	--	--	IP65					
Lubrication	--	--	Synthetic Oil					
Service Life	[Hours]	--	25,000					
Weight	[kg]	*6	8.2					

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

# EJP SERIES Right-angle Worm

## EJP 064 1-Stage Specifications

Frame Size	064										
Stage	1-Stage										
Ratio	Unit	Note	5	6	7	8	9	10	15		
Nominal Output Torque	[Nm]	--	120	180	140	150	150	150	160		
Maximum Acceleration Torque	[Nm]	--	170	180	190	210	210	210	220		
Emergency Stop Torque	[Nm]	--	360	540	420	450	450	450	480		
No Load Running Torque	[Nm]	*1	2.72								
Nominal Input Speed	[rpm]	--	2,000								
Maximum Continuous Input Speed	[rpm]	--	4,000								
Maximum Cyclic Input Speed	[rpm]	--	6,000								
Maximum Radial Load	[N]	*2	9,210								
Maximum Axial Load	[N]	*3	9,210								
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	5.42	4.66	4.20	3.90	3.69	3.54	3.20		
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	6.24	5.48	5.02	4.72	4.51	4.36	4.02		
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	11.8	11.1	10.6	10.3	10.1	9.94	9.60		
Efficiency	[%]	*4	92	92	91	91	90	90	88		
Torsional Rigidity	[Nm/arcmin]	--	17.5								
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 12$								
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 5$								
Maximum Torsional Backlash (Zero)	[Arc-min]	--	$\leq 0$								
Noise Level	[dBA]	*5	$\leq 80$								
Ambient Temperature	[°C]	--	-25 ~ 100								
Permitted Housing Temperature	[°C]	--	100								
Protection Class	--	--	IP65								
Lubrication	--	--	Synthetic Oil								
Service Life	[Hours]	--	25,000								
Weight	[kg]	*6	15								

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJP 064 1-Stage Specifications

Frame Size	064							
Stage	1-Stage							
Ratio	Unit	Note	20	25	30	40	50	60
Nominal Output Torque	[Nm]	--	160	160	150	150	140	130
Maximum Acceleration Torque	[Nm]	--	220	220	210	200	190	180
Emergency Stop Torque	[Nm]	--	480	480	450	450	420	390
No Load Running Torque	[Nm]	*1	2.72					
Nominal Input Speed	[rpm]	--	2,000					
Maximum Continuous Input Speed	[rpm]	--	4,000					
Maximum Cyclic Input Speed	[rpm]	--	6,000					
Maximum Radial Load	[N]	*2	9,210					
Maximum Axial Load	[N]	*3	9,210					
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	3.07	3.02	2.99	2.96	2.94	2.93
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	3.89	3.84	3.81	3.78	3.76	3.75
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	9.47	9.42	9.39	9.36	9.34	9.33
Efficiency	[%]	*4	85	84	80	76	73	70
Torsional Rigidity	[Nm/arcmin]	--	17.5					
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 12$					
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 5$					
Maximum Torsional Backlash (Zero)	[Arc-min]	--	$\leq 0$					
Noise Level	[dBA]	*5	$\leq 80$					
Ambient Temperature	[°C]	--	-25 ~ 100					
Permitted Housing Temperature	[°C]	--	100					
Protection Class	--	--	IP65					
Lubrication	--	--	Synthetic Oil					
Service Life	[Hours]	--	25,000					
Weight	[kg]	*6	15					

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJP 076 1-Stage Specifications

Frame Size	076										
Stage	1-Stage										
Ratio	Unit	Note	5	6	7	8	9	10	15		
Nominal Output Torque	[Nm]	--	200	220	230	250	260	260	270		
Maximum Acceleration Torque	[Nm]	--	270	310	320	340	350	370	380		
Emergency Stop Torque	[Nm]	--	600	660	690	750	780	780	810		
No Load Running Torque	[Nm]	*1	3.46								
Nominal Input Speed	[rpm]	--	2,000								
Maximum Continuous Input Speed	[rpm]	--	4,000								
Maximum Cyclic Input Speed	[rpm]	--	6,000								
Maximum Radial Load	[N]	*2	10,980								
Maximum Axial Load	[N]	*3	10,980								
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	13.3	11.1	9.8	8.94	8.35	7.92	6.92		
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	16.2	14.0	12.7	11.8	11.2	10.8	9.78		
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	19.9	17.7	16.3	15.5	14.9	14.5	13.5		
Efficiency	[%]	*4	92	92	91	91	90	89	88		
Torsional Rigidity	[Nm/arcmin]	--	38.5								
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 10$								
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 4$								
Maximum Torsional Backlash (Zero)	[Arc-min]	--	$\leq 0$								
Noise Level	[dBA]	*5	$\leq 80$								
Ambient Temperature	[°C]	--	-25 ~ 100								
Permitted Housing Temperature	[°C]	--	100								
Protection Class	--	--	IP65								
Lubrication	--	--	Synthetic Oil								
Service Life	[Hours]	--	25,000								
Weight	[kg]	*6	25								

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJP 076 1-Stage Specifications

Frame Size	076							
Stage	1-Stage							
Ratio	Unit	Note	20	25	30	40	50	60
Nominal Output Torque	[Nm]	--	270	270	260	250	240	230
Maximum Acceleration Torque	[Nm]	--	370	370	360	340	330	320
Emergency Stop Torque	[Nm]	--	810	810	780	750	720	690
No Load Running Torque	[Nm]	*1	3.46					
Nominal Input Speed	[rpm]	--	2,000					
Maximum Continuous Input Speed	[rpm]	--	4,000					
Maximum Cyclic Input Speed	[rpm]	--	6,000					
Maximum Radial Load	[N]	*2	10,980					
Maximum Axial Load	[N]	*3	10,980					
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	6.57	6.41	6.32	6.24	6.19	6.17
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	9.43	9.27	9.18	9.10	9.05	9.03
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	13.1	13.0	12.9	12.8	12.7	12.7
Efficiency	[%]	*4	85	84	80	76	73	70
Torsional Rigidity	[Nm/arcmin]	--	38.5					
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 10$					
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 4$					
Maximum Torsional Backlash (Zero)	[Arc-min]	--	$\leq 0$					
Noise Level	[dBA]	*5	$\leq 80$					
Ambient Temperature	[°C]	--	-25 ~ 100					
Permitted Housing Temperature	[°C]	--	100					
Protection Class	--	--	IP65					
Lubrication	--	--	Synthetic Oil					
Service Life	[Hours]	--	25,000					
Weight	[kg]	*6	25					

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models



## EJP 089 1-Stage Specifications

Frame Size	089										
Stage	1-Stage										
Ratio	Unit	Note	5	6	7	8	9	10	15		
Nominal Output Torque	[Nm]	--	340	380	400	430	440	460	480		
Maximum Acceleration Torque	[Nm]	--	480	540	570	600	620	640	660		
Emergency Stop Torque	[Nm]	--	1020	1140	1200	1290	1320	1380	1440		
No Load Running Torque	[Nm]	*1	4.20								
Nominal Input Speed	[rpm]	--	2,000								
Maximum Continuous Input Speed	[rpm]	--	4,000								
Maximum Cyclic Input Speed	[rpm]	--	6,000								
Maximum Radial Load	[N]	*2	18,170								
Maximum Axial Load	[N]	*3	18,170								
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	28.3	23.9	21.2	19.5	18.3	17.4	15.4		
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	32.3	27.8	25.2	23.4	22.2	21.4	19.4		
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	36.9	32.5	29.8	28.1	26.9	26.0	24.0		
Efficiency	[%]	*4	91	91	91	90	90	89	87		
Torsional Rigidity	[Nm/arcmin]	--	71								
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 10$								
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 3$								
Maximum Torsional Backlash (Zero)	[Arc-min]	--	$\leq 0$								
Noise Level	[dBA]	*5	$\leq 83$								
Ambient Temperature	[°C]	--	-25 ~ 100								
Permitted Housing Temperature	[°C]	--	100								
Protection Class	--	--	IP65								
Lubrication	--	--	Synthetic Oil								
Service Life	[Hours]	--	25,000								
Weight	[kg]	*6	50								

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

## EJP 089 1-Stage Specifications

Frame Size	089							
Stage	1-Stage							
Ratio	Unit	Note	20	25	30	40	50	60
Nominal Output Torque	[Nm]	--	470	470	450	430	410	400
Maximum Acceleration Torque	[Nm]	--	650	650	620	590	570	550
Emergency Stop Torque	[Nm]	--	1410	1410	1350	1290	1230	1200
No Load Running Torque	[Nm]	*1	4.20					
Nominal Input Speed	[rpm]	--	2,000					
Maximum Continuous Input Speed	[rpm]	--	4,000					
Maximum Cyclic Input Speed	[rpm]	--	6,000					
Maximum Radial Load	[N]	*2	18,170					
Maximum Axial Load	[N]	*3	18,170					
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	14.7	14.4	14.2	14.0	13.9	13.9
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	18.7	18.3	18.1	18.0	17.9	17.8
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	23.3	23.0	22.8	22.6	22.5	22.5
Efficiency	[%]	*4	84	83	79	75	72	69
Torsional Rigidity	[Nm/arcmin]	--	71					
Maximum Torsional Backlash (Standard)	[Arc-min]	--	$\leq 10$					
Maximum Torsional Backlash (Low)	[Arc-min]	--	$\leq 3$					
Maximum Torsional Backlash (Zero)	[Arc-min]	--	$\leq 0$					
Noise Level	[dBA]	*5	$\leq 83$					
Ambient Temperature	[°C]	--	-25 ~ 100					
Permitted Housing Temperature	[°C]	--	100					
Protection Class	--	--	IP65					
Lubrication	--	--	Synthetic Oil					
Service Life	[Hours]	--	25,000					
Weight	[kg]	*6	50					

\*1) Torque at no load applied to the input shaft at 2,000 rpm

\*2) The maximum radial load the gearbox can accept

\*3) The maximum axial load the gearbox can accept

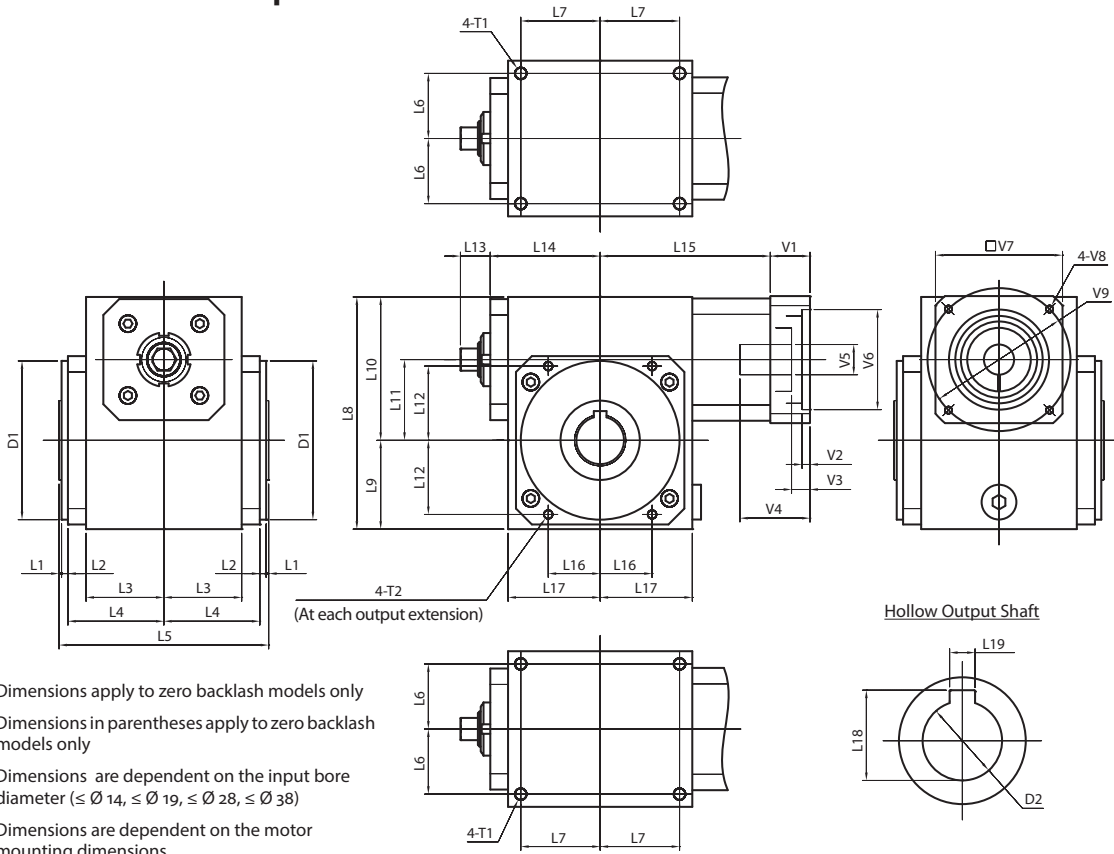
\*4) The efficiency at the nominal output torque rating

\*5) Measured with no load applied to the input shaft at 2,000 rpm

\*6) Weight may vary slightly between models

# EJP SERIES Right-angle Worm

## EJP Dimensions – Hollow Output Shaft

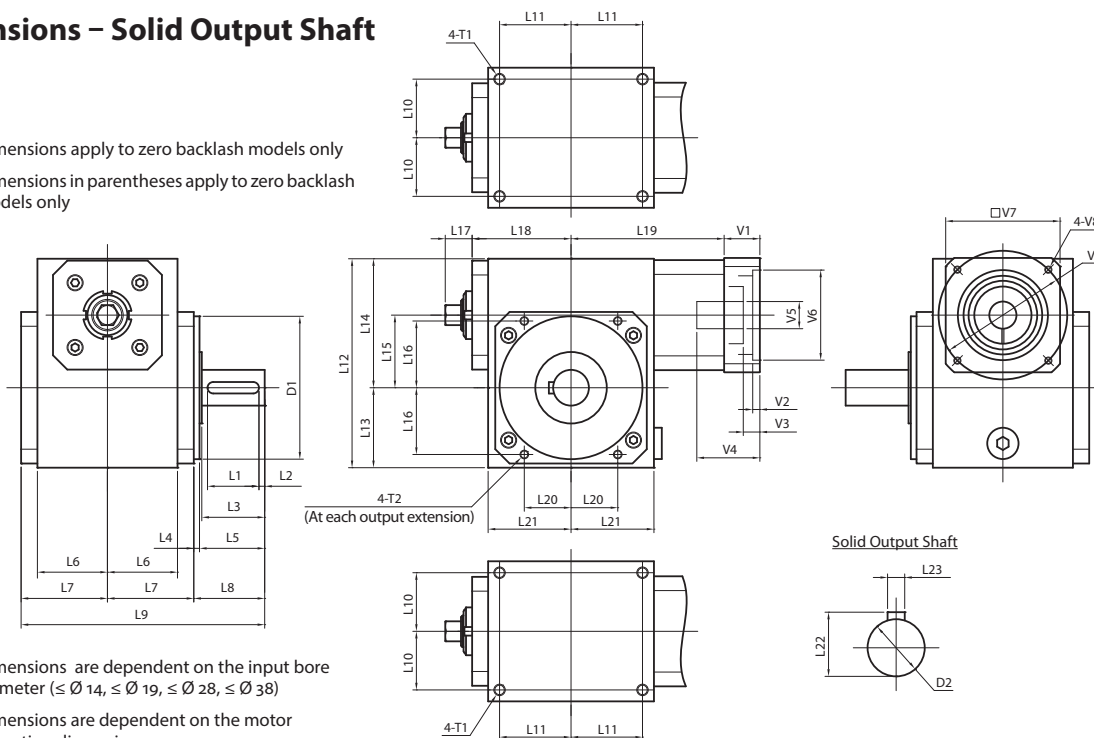


- \*1) Dimensions apply to zero backlash models only
- \*2) Dimensions in parentheses apply to zero backlash models only
- \*3) Dimensions are dependent on the input bore diameter ( $\leq \varnothing 14$ ,  $\leq \varnothing 19$ ,  $\leq \varnothing 28$ ,  $\leq \varnothing 38$ )
- \*4) Dimensions are dependent on the motor mounting dimensions

Frame Size	Unit	Note	EJP-038	EJP-051	EJP-064	EJP-076	EJP-089
L1	[mm]	--	1	1	1	2	2
L2	[mm]	--	4	4	4	4	4
L3	[mm]	--	39	49	54	73.5	90
L4	[mm]	--	51	60.5	70	94	111.5
L5	[mm]	--	112	132	148	200	234
L6	[mm]	--	32	41	44	63	80
L7	[mm]	--	42	50	68.5	79	95
L8	[mm]	--	118	146.5	181	214	252
L9	[mm]	--	45	56	73	82	100
L10	[mm]	--	73	90.5	108	132	152
L11	[mm]	--	38.1	50.8	63.5	76.2	88.9
L12	[mm]	--	34.5	46.5	57.5	64.5	80.5
L13	[mm]	*1	---	22	22	32	35
L14	[mm]	*2	63	69.5 (71)	94 (96)	110 (111)	125.5 (131)
L15	[mm]	*3	96.5 - 106.5	105 - 115	130.5 - 142.5	151 - 163	165 - 177
L16	[mm]	--	18.5	32.5	40	45.5	46.5
L17	[mm]	--	50.5	58	79	89.5	105
L18	[mm]	--	28.5	33.5	38.5	49.0	64.5
L19	[mm]	--	8	8	10	14	18
D1 (h8)	[mm]	--	$\varnothing 64$	$\varnothing 100$	$\varnothing 120$	$\varnothing 134$	$\varnothing 145$
D2 (H7)	[mm]	--	$\varnothing 25$	$\varnothing 30$	$\varnothing 35$	$\varnothing 45$	$\varnothing 60$
T1	[mm]	--	4xM8x12	4xM8x12	4xM8x12	4xM10x15	4xM10x15
T2	[mm]	--	4xM6x9	4xM6x9	4xM8x12	4xM10x15	4xM10x15
V1 ~ V9	[mm]	*4	Motor attachment dimensions are made to fit your servo motor.				

## EJP Dimensions – Solid Output Shaft

- \*1) Dimensions apply to zero backlash models only
- \*2) Dimensions in parentheses apply to zero backlash models only



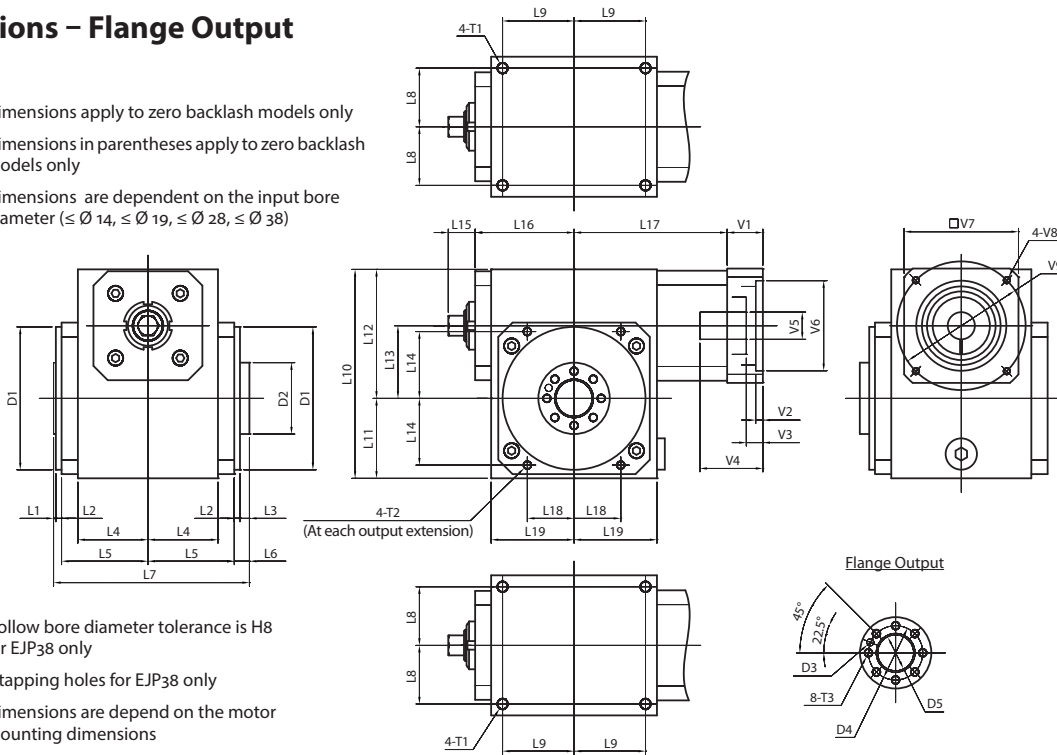
- \*3) Dimensions are dependent on the input bore diameter ( $\leq \text{Ø} 14$ ,  $\leq \text{Ø} 19$ ,  $\leq \text{Ø} 28$ ,  $\leq \text{Ø} 38$ )
- \*4) Dimensions are dependent on the motor mounting dimensions

Frame Size	Unit	Note	EJP-038	EJP-051	EJP-064	EJP-076	EJP-089
L1	[mm]	--	22	36	40	50	63
L2	[mm]	--	90	4	4	5	5
L3	[mm]	--	30	44	50	67	83
L4	[mm]	--	4	4	4	4	4
L5	[mm]	--	31	45.5	51	67	84.5
L6	[mm]	--	39	49	54	73.5	90
L7	[mm]	--	51	60.5	70	94	111
L8	[mm]	--	35	49.5	55	71	88.5
L9	[mm]	--	137	170.5	194	259	311.5
L10	[mm]	--	32	41	44	63	80
L11	[mm]	--	42	50	68.5	79	95
L12	[mm]	--	118	146.5	181	214	252
L13	[mm]	--	45	56	73	82	100
L14	[mm]	--	73	90.5	108	132	152
L15	[mm]	--	38.1	50.8	63.5	76.2	88.9
L16	[mm]	--	34.5	46.5	57.5	64.5	80.5
L17	[mm]	*1	---	22	22	32	35
L18	[mm]	*2	63	69.5 (71)	94 (96)	110 (111)	125.5 (131)
L19	[mm]	*3	96.5 - 106.5	105 - 115	130.5 - 142.5	151 - 163	165 - 177
L20	[mm]	--	18.5	32.5	40	45.5	46.5
L21	[mm]	--	50.5	58	79	89.5	105
L22	[mm]	--	22.5	28	33	38	48.5
L23	[mm]	--	6	8	8	10	14
D1 (h8)	[mm]	--	ø64	ø100	ø120	ø134	ø145
D2 (k6)	[mm]	--	ø20	ø25	ø30	ø35	ø45
T1	[mm]	--	4xM8x12	4xM8x12	4xM8x12	4xM10x15	4xM10x15
T2	[mm]	--	4xM6x9	4xM6x9	4xM8x12	4xM10x15	4xM10x15
V1 ~ V9	[mm]	*4	Motor attachment dimensions are made to fit your servo motor.				

# EJP SERIES Right-angle Worm

## EJP Dimensions – Flange Output

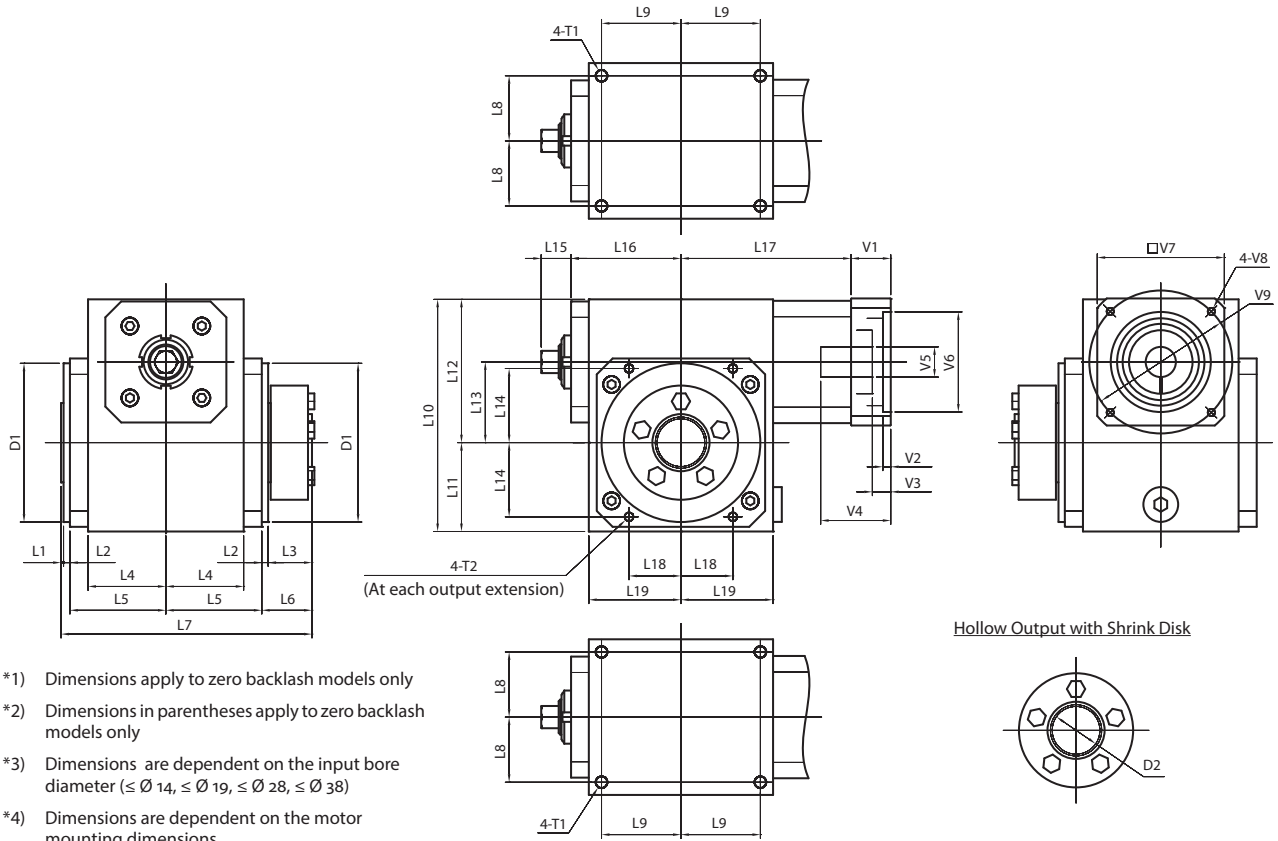
- \*1) Dimensions apply to zero backlash models only
- \*2) Dimensions in parentheses apply to zero backlash models only
- \*3) Dimensions are dependent on the input bore diameter ( $\leq \varnothing 14$ ,  $\leq \varnothing 19$ ,  $\leq \varnothing 28$ ,  $\leq \varnothing 38$ )



- \*4) Hollow bore diameter tolerance is H8 for EJP38 only
- \*5) 4 tapping holes for EJP38 only
- \*6) Dimensions are depend on the motor mounting dimensions

Frame Size	Unit	Note	EJP-038	EJP-051	EJP-064	EJP-076	EJP-089
L1	[mm]	--	1	1.5	1.5	2	2
L2	[mm]	--	4	4	4	4	4
L3	[mm]	--	6	6.5	6	7	7
L4	[mm]	--	39	49	54	73.5	90
L5	[mm]	--	51	60.5	70	94	111
L6	[mm]	--	10	10.5	10	11	11
L7	[mm]	--	117	137	153	205	239
L8	[mm]	--	32	41	44	63	80
L9	[mm]	--	42	50	68.5	79	95
L10	[mm]	--	118	146.5	181	214	252
L11	[mm]	--	45	56	73	82	100
L12	[mm]	--	73	90.5	108	132	152
L13	[mm]	--	38.1	50.8	63.5	76.2	88.9
L14	[mm]	--	34.5	46.5	57.5	64.5	80.5
L15	[mm]	*1	--	22	22	32	35
L16	[mm]	*2	63	69.5 (71)	94 (96)	110 (111)	125.5 (131)
L17	[mm]	*3	96.5 - 106.5	105 - 115	130.5 - 142.5	151 - 163	165 - 177
L18	[mm]	--	18.5	32.5	40	45.5	46.5
L19	[mm]	--	50.5	58	79	89.5	105
D1 (h8)	[mm]	--	ø64	ø100	ø120	ø134	ø145
D2 (h11)	[mm]	--	ø40	ø50	ø65	ø80	ø90
D3 (H9)	[mm]	--	ø5 x 10	ø5 x 10	ø6 x 10	ø8 x 10	ø8 x 10
D4	[mm]	--	ø28	ø38	ø50	ø60	ø70
D5 (H7)	[mm]	*4	ø16	ø25	ø30	ø35	ø45
T1	[mm]	--	4xM8x12	4xM8x12	4xM8x12	4xM10x15	4xM10x15
T2	[mm]	--	4xM6x9	4xM6x9	4xM8x12	4xM10x15	4xM10x15
T3	[mm]	*5	4xM6x12	8xM6x12	8xM8x16	8xM8x16	8xM10x20
V1 ~ V9	[mm]	*6	Motor attachment dimensions are made to fit your servo motor.				

## EJP Dimensions – Hollow Output with Shrink Disk



- \*1) Dimensions apply to zero backlash models only
- \*2) Dimensions in parentheses apply to zero backlash models only
- \*3) Dimensions are dependent on the input bore diameter ( $\leq \varnothing 14$ ,  $\leq \varnothing 19$ ,  $\leq \varnothing 28$ ,  $\leq \varnothing 38$ )
- \*4) Dimensions are dependent on the motor mounting dimensions

Frame Size	Unit	Note	EJP-038	EJP-051	EJP-064	EJP-076	EJP-089
L1	[mm]	--	1	1.5	1.5	2	2
L2	[mm]	--	4	4	4	4	4
L3	[mm]	--	25	27.5	36	37	38.5
L4	[mm]	--	39	49	54	73.5	90
L5	[mm]	--	51	60.5	70	94	111
L6	[mm]	--	29	31.5	40	41	42.5
L7	[mm]	--	136	158	183	235	271
L8	[mm]	--	32	41	44	63	80
L9	[mm]	--	42	50	68.5	79	95
L10	[mm]	--	118	146.5	181	214	252
L11	[mm]	--	45	56	73	82	100
L12	[mm]	--	73	90.5	108	132	152
L13	[mm]	--	38.1	50.8	63.5	76.2	88.9
L14	[mm]	--	34.5	46.5	57.5	64.5	80.5
L15	[mm]	*1	---	22	22	32	35
L16	[mm]	*2	63	69.5 (71)	94 (96)	110 (111)	125.5 (131)
L17	[mm]	*3	96.5 - 106.5	105 - 115	130.5 - 142.5	151 - 163	165 - 177
L18	[mm]	--	18.5	32.5	40	45.5	46.5
L19	[mm]	--	50.5	58	79	89.5	105
D1 (h8)	[mm]	--	$\varnothing 64$	$\varnothing 100$	$\varnothing 120$	$\varnothing 134$	$\varnothing 145$
D2 (H6)	[mm]	--	$\varnothing 25$	$\varnothing 30$	$\varnothing 35$	$\varnothing 45$	$\varnothing 60$
T1	[mm]	--	4xM8x12	4xM8x12	4xM8x12	4xM10x15	4xM10x15
T2	[mm]	--	4xM6x9	4xM6x9	4xM8x12	4xM10x15	4xM10x15
V1 ~ V9	[mm]	*4	Motor attachment dimensions are made to fit your servo motor.				